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TREATISE

In which

The Plagiarism (from
in Dr. BRA

REMARKS on
tions of the *Eye*, in
the Difference in
plain'd and reconcil

ALS

WILLIAM CUREN

A
SUPPLEMENT
TO
Kennedy's Ophthalmographia;
OR,
TREATISE of the EYE;



In which is observ'd

The Plagiarism (from that Treatise) contain'd
in Dr. BRACKEN'S *Farriery*.

REMARKS on Dr. PORTERFIELD'S Mo-
tions of the *Eye*, in the Medical Essays, with
the Difference in Opinions of *Cataracts*, ex-
plain'd and reconcil'd.

ALSO ON

WILLIAM CHESELDEN Esq; his Observa-
tions on the *Eye*, &c. in his Anatomy; and of
the *Improvements* made in our *Hospitals*, &c.

ON

Dr. P. SHAW, in his *Practice of Physick*; Dr.
JURIN on *Vision*; and Mr. SHARP on the *Opera-
tions of Surgery*.

LONDON:

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CRITICAL LETTERS
FROM

Dr. Henry Bracken

(OF FARRIERY) ON

Kennedy's Ophthalmographia;

OR,

Treatise of the EYE.

Together with the proper ANSWERS to
those LETTERS by the Author of the
said OPHTHALMOGRAPHIA.

In which are observed, That most of what is
material on the EYE in BRACKEN's
FARRIERY is taken from the said *Treatise*
of the EYE.

To which is added,

A *Recipe*, or *Rules* for Dr. BRACKEN's, &c. at-
taining to Eminence in Physick.

First LETTER to Dr. BRACKEN.

SIR,



YOUR having been pleased to publish
me to the World (in your Book of Far-
riership) is the Occasion of the present
Letter. You there, in describing the
CrySTALLINE Humour of the *Eye*, men-
tion the *Sacculus*, or Coat, in which it lies, as a
Proof against his M——s Oculist T——r, that
B *this*

2 Letters, Notes, &c. relating to the EYE,

this part was not first discover'd by him, according to the idle Insinuations of that *vain Pretender*. So far I am us'd as to defeating of him. But then, your next Observation on that Head, is to *defeat me also*; to wit, *That on flitting the said Tunic, the Crystalline will immediately spring out*. In which you very positively (are pleas'd) to assure the World, *That I am certainly mistaken*. I shall first then observe, Sir, that you somewhat suddenly fall very hard upon a young Author, as I was at the time of publishing that *Treatise*, and which might, perhaps, with some pass for some sort of Alleviation of what Faults, or Errors, I might then, and there, have committed on that *nice Subject*. One might also have imagin'd, that a cautious, generous, and well-meaning Author (a Searcher after Truth only) would first have sought to be satisfy'd (of an Author still alive) in such particular he judg'd him wrong in, before the so frankly exposing him to the World; and setting him in *such a Light*. Especially one whom you seem not to have thought altogether unworthy *your perusal*. You indeed seem, Sir, justly enough to charge the fore-said Oculist T——r, with the not having sufficiently read or consider'd *my Treatise*; since he would, or might there have observ'd, he had made *no new Discovery*. Pardon me then, Sir, if I cannot help saying, that I can hardly imagine, that any one who has sufficiently consider'd my Account of the *Crystalline Humour*, and that of the *Nature of Cataracts*, would not, methinks, be quite so ready, *positively to affirm me in Error*. But Sir, what is it you assert? Is it that my Description of the *Crystalline*, with its *Tunic*, is wrong? Or is it a wrong Account I have given of the *Nature of Cataracts*? For you fly from one to t'other, on my describing of that Part (to wit, the *Crystalline*, &c.) I shall not, Sir, at present trouble you further

to and from Dr. BRACKEN, on Farriery. 3

ther to explain myself on this Head, until I know whether you shall judge this any way worthy your Notice. From Sir,

Your humble Servant,

York-House, York-
Buildings, Jan.
31, 1737-8.

PT. KENNEDY.



*Dr. BRACKEN's first LETTER, in answer
to the foregoing.*

*To Dr. KENNEDY, at York-House in York-
Buildings, London.*

SIR,

I Have the Favour of Yours, dated the 31st January, and am sorry you should take any thing amiss that I have said of you in my Treatise upon Farriery; for I assure you, I rather designed you a Compliment than otherwise: For you'll observe the Expression, (*viz.* page 185) where I say, *Dr. Kennedy is mistaken in one Particular*; which is in effect saying, that the rest of your Performance is very good, as I really think it is; and, if you writ it when only a young Man, I think you must, at that time, have laid out your Talents in Anatomy very well; therefore please to consider my Meaning as I now express myself. If my former Words did not thoroughly go down with you, for, *Humanum est errare*, yet I must back my Assertion in the Book of Farriery, not only because I have had long Experience in curing Diseases of the Eye, but by reason of the Make and Constructure of that admirable Organ, and the Manner how Vision is perform'd, was my particular Study and Delight, when I was in the publick Schools for such Purposes, &c. and what I only insist upon is, that *though you do cut the Capsula of the Crystalline, in*

B 2

couch-

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couching a Cataract, yet shall not that Body immediately spring out of the Cavity it makes in the vitreous Humour. And notwithstanding this, I agree with you that the CrySTALLINE is not any ways adherent to the Membranes that surround it; for if it sprung out, on cutting the *Sacculus*, there could be no such thing as distinct Vision performed in that Eye, for Reasons too plain to be insisted upon; especially when I write to Dr. *Kennedy*, who knows the use of the CrySTALLINE Humour so well, and that the Convexity of the *Lens*, in use with such, who have been couched, must be in proportion to the number of *Laminæ* turn'd off by the Needle, when we (as it were) scrape the CrySTALLINE Humour, for the Cure of Cataracts; and by such means make it of a more plain Surface, so that the Rays of Light, admitted into the Eye, would not (without such artificial Glasses) fall properly convergent upon the *Retina*.

As to your being an *Author* of such Treatise upon the Eye, &c. and yet alive, I am very glad of it; and, I now assure you under my Hand, that (so far as I am a Judge) you are both a good Author and Compiler, therefore pray be not displeas'd at me for mentioning you in my Book, as guilty *only of one Mistake*; since I am not, neither pretend to be, infallible, tho' I must own, I am a little positive, where the Practice is warranted by Experiments.

If there be any Thing farther you would have me explain my self in, I am ready to do it when thereto requested by any Gentleman, either of the Faculty, or otherwise; and as I expect to be in *London* e'er long, I shall make it my Business to wait upon you, and discourse the Thing over calmly, for I would not have you and I to fall out, and thereby verify what the famous burlesque Poet says with relation to all Professions except Lawyers, (*viz.*)

Divines

to and from Dr. BRACKEN, on Farriery. 5

Divines of all sorts, and Physicians.
Philosophers, Mathematicians ;
The *Galenists*, and *Paracelsian*,
Condemn the Way each other deals in ;
Anatomists dissect and mangle,
To cut themselves out Work to wrangle ;
Astrologers dispute their Dreams,
That in their Sleep they talk of Schemes ;
And Heralds stickle who got who,
So many hundred Years ago.

I am, Sir,

Your most humble Servant,

HENRY BRACKEN.



Second LETTER to Dr. BRACKEN.

SIR,

I Received the Favour of your complaisant Letter, in answer to my First, (tho' I can hardly judge it very direct in answer to my Interrogations.) Neither can I imagine that the World is to judge so favourably of my *Treatise* because you quote *one Passage* only, and at the same time suppose, or affirm me to be *mistaken in that one Particular*: That from thence, I say, they are to think that you mean (or that it's in effect saying) *that the rest of the Performance is very good*. But you'll please, Sir, to observe also, that in the same page, 185, in your Book (omitted in the Letter) you there likewise say, *that I am most certainly wrong in this, because* (continue you) *we never couch a Cataract but we cut the Capsula, or thin Membrane, &c.* That there are several Errors in my Book, whether of Language, Orthograghy, &c. I am pretty well assured of ; yet I have not much inclin'd to remodel,

B 3

del,

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del, or improve it, as not inclining to be more distinguish'd in that Branch, than in any other of the Profession (which I pretend to understand equally well) since the Faculty in general are but too apt to distinguish a Man on such Branch only, in which they find him knowing : They being for the most part but too deficient in this Particular. Nor shall I pretend to determine how often, so very much more knowing they are in other Branches ; yet I have left off all Operations in this, or any other way, many Years ago. However, Sir, whatever Faults or Mistakes there may be contain'd in the *said Treatise*, you have not yet hit upon the right one. You seem then, to me, Sir, if not to contradict yourself in your Letter, you at least appear (plainly enough without perceiving it) to answer yourself in the Charge you bring against me. Yet e'er I go further on this Head, I must again observe to you (as in my former) that the Passage you quote out of my *Treatise* is on my *Dissection of the Eye*, and particularly that of the *Crystalline Humour*, in its *perfect and natural State*, without *Maladie*, &c. Now if then, as you say, *you agree with me that the Crystalline is not any ways adherent to the Membranes that surround it* ; must it not then, Sir, on cutting such, and making a sufficient Aperture in the said Membrane, or *Sacculus*, necessarily follow, that the said *Lens*, or *Crystalline* (no way adherent) will spring or fall out ? Had you dissected this Part in its natural State, and then told me it was not so, you would then, indeed, have said something ; tho' I think you have been wiser than to acquaint me with such News. And now, Sir, tho' I think I have here said sufficient to prove it true, what I have there said in my *Treatise*, since I speak not of *Diseases* in that part of the said Book ; yet for your farther Satisfaction, I will go a little farther with you, even in the *Disease* attending *that Part*, from which (Dis-

(Disease) you are pleased to take your *Proofs* of my Dissection of a *sound Eye, being wrong*. Admitting then, Sir, the *Maladie* of the *Crystalline* or *Cataract* (as you say,) and that you do cut the *Capsula* of the *Crystalline* in couching the *Cataract*; and that a number of the *Lamine* are turn'd off by the *Needle*, when as it were (say you) the *Crystalline* is scraped. Now, then, Sir, the *Membrane* or *Capsula* being thus surely sufficiently cut, lacerated, or taken off, and the *Lens* or *Crystalline* tho' so diseas'd, yet being no way adherent to its said *Membrane*, what, in the name of goodness, should hinder it from falling down, even as the former in the perfect State? Am I then, Sir, to be publish'd *certainly wrong and mistaken*, &c. because you see not clearly the Difficulties following thereon, as to the nature of *Vision*, &c? or am I, or must I then account to you for all the *Difficulties* you meet with in your *Practice*? or on this Head? Otherwise you'll rashly brand me to the *World* with being *mistaken, wrong, &c.* But, Sir, tho' I have not granted all you assert in the *Affair* of *operating*; neither do I judge it necessary to call upon you, sufficiently to prove the *whole*, since my *Intention* here, is rather to defend myself, than to criticise. However, Sir, since there is like to be no *Peace* in *Israel* if I do not some way account or answer you how *Vision* is perform'd; should the *diseas'd Crystalline* fall or be beaten down, I must then observe and own to you, Sir, that I am not a little surpriz'd at your asking (or of your *Difficulty* in this) when I consider (being credibly inform'd) that you have not only translated *Monsieur Maitre-Jean*; but that you have even writ *Notes upon him*, which you intend to publish. What shall I say then? For tho' I have not look'd into that *Author* upwards of twenty Years, yet I well remember, you might there sufficiently satisfy your self about the nature of *Vision*, on the

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diseas'd Crystalline or *Cataract* being *beaten down*, which, according to that *Author*, by its *Pressure* on the *side* or lower *Edge* of the *vitreous Humour*, which (by its natural Softness) occasions the *Cavity* of the said *Humour* to *arise*; and thus to become *convex*, and so in a great measure to answer the defect of want of the *Crystalline*, *tho' never* (says he) *to see so well as before*, which (continues he) *they never do after couching*. But now I think on't, you might have seen all this and much more from the said *Author* in my Book, page 79 and 88. Am I then, Sir, to acquaint you with all this, after your just now translating and *writing Notes* on that *Author*? But now, as to my own particular Opinion on this Subject, I might, perhaps, be able to say more, or even somewhat *new*; but I judge that I have at present said enough to have render'd this Letter sufficiently long. However, I must yet observe, it seems necessary I should yet write to you, tho' you propose coming to Town, since I understand they are upon publishing a new Edition speedily of your *Farriery*, in which I should expect some Alteration, *Post-script*, or *Errata*, &c. if you any way allow to be true, what is here advanced, from,

Sir,

Your humble Servant,

PT. KENNEDY.

P. S. I cannot judge the Compiles from burlesque Wits or Poets to be of great Force, when on serious Subjects; since generally but Wit at best, and meant as such by the Author, rarely to bear a strict Scrutiny. *Hudibras* well knew, that though Money-getting-Lawyers agree in taking Money, or, like *Swiss*, fight for their Pay; yet he well
knew

knew (I say) also, that the greatest Lawyers, who fought Truth principally, as *Grotius*, *Selden*, &c. writ whole Volumes against each other.



Dr. KENNEDY's third LETTER.

SIR,

I Was in hopes of having received some Answer from you to my last (to wit, my second Letter) being an Answer to your first ; which said Response to yours, you must necessarily either have found to be erroneous or just : If the first, you ought, no doubt, in such case to have shewn me my Error, and so to vindicate what you had before affirm'd ; which I doubt not you would readily enough have done, had there been the least room for it. But if found just, I say, I cannot imagine but that you ought as freely and readily to have own'd it so to be ; especially if you sincerely seek after Truth only, and not an Obstinacy of refusing to acknowledge it ; since, as you observe, *Humanum est errare*. For my own part, were I guilty of such a Fault, I should very readily, for the sake of Mankind, freely own it ; there being less Dishonour in so doing than in the refusal, or in the persisting in Error. Thus a Man who only seeks *Truth*, *Justice*, and *Improvement*, will be in no *Fear* or *Apprehensions* in communicating his Thoughts under his hand. But 'tis well, Sir, if you be not more ready to *attack* without giving *proper Notice* in such *Affairs* than to *defend*, and to make good such *attack*, such Person (unawares attack'd) having recover'd himself, or being now *properly prepared* and in a State of doing himself *Justice*. Or, have I then in my last resolved or satisfy'd you in your *Difficulties*, yet incline not to
own

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own it? Nor judge proper to *back* (as you say) *what you have asserted in your Farriery*. However, Sir, since I cannot have a more *full* or a more *direct* Answer from you, I must conclude that you still approve of that you *first published*; since the same Words are in the second Edition continued as before, and just now publish'd; even since the writing you my last Letter, by which I required an *Alteration* to be made in that particular, of my *being wrong*, &c. in your said second Edition; which 'tis true, the Bookseller acquainted me was *printed off before* I spoke, and could not therefore be alter'd without great Charge; that it was *his Book*, not yours, &c. I told him, as I had done you, it might be supply'd by *Errata* or *Postscript*, at a small Expence: Nor was it any way material to me who the Book belong'd to. Now, since there has been no regard had to these *Remonstrances*; nor that you have taken any Notice, or to have made the least *Apology* for *so doing*; I must, I say, in effect then conclude, such second Publication to be a kind of Answer. I have, however, always, first chose to communicate my Thoughts to such as have done me any Injustice, rather than rashly to take the more rigid way of doing my self Justice, and have thus accordingly still chose to write you this; tho' probably from what has before been observ'd, 'tis likely you judge you have taken the Method most proper for yourself, and consequently leave me to take *mine*, or to *determine* what is most suitable to

Your humble Servant, &c.

York-house, March

the 4th, 1737-8. London.

N. B. The first Post I might reasonably have expected your Answer, I found instead thereof you had writ to your Bookseller, who, in a few days there-

to and from Dr. BRACKEN, on Farriery. 11
thereafter, publish'd your second Edition of the said
Farriery, in all probability by your Direction that
Post, at which time I understood that your Affairs
together were then finish'd, and intended not now
to come to Town as you had propos'd.



Dr. BRACKEN's second LETTER.

Lancaster, 7th March, 1737.

SIR,

I Received your second Letter this Post, and should
have answer'd your first before now if Business
had not hinder'd; and really if I had found any
Reason to alter my Opinion, I should (on read-
ing yours) have omitted some small Concerns, I
had then in hand, to have given a proper An-
swer; however, I now say, and vouch it, as an
undoubted Truth to a Demonstration, (*viz.*) That
'tis impossible, according to the Rules in Optics,
for the *vitreous Humour* to supply the place of the
Crystalline, when the latter is wholly beat down,
or put out of its place in couching for a *Cataract*;
and this is very easy to be shewn in a *Camera Ob-*
scura, for you cannot, by any Glass, or *Diaphanous*
Medium, in the Shape and Figure of the *vitreous*
Humour, either before or after the *Crystalline* is re-
mov'd, cause the *Luminous Rays* to become conver-
gent upon the *Retina*; nay, even not so much as to
represent any Image whatsoever: tho' I will readily
own, such Person may distinguish Light from outer
Darkness, and some of the *Colours* which contain
the largest Particles of *Matter*, such as *Red*, &c.

If you only place yourself in a proper *Camera*
Obscura with a Glass of a fit Convexity to represent
the *Cornea*, and another held in your Hand (which
must

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must be of a larger *Sphere* than the first) to represent the *Crystalline*, I say, by this means the *Rays* become properly convergent upon the *Retina*, or white Paper; but, on taking away the convex Glass in your Hand, and placing a Glass of a globular Figure, (that being near the Figure of the *vitreous Humour* when you raise it up, as imagin'd, in the place of the *Crystalline*;) I say, by such a Glass, nor other Diaphanous Body of the same Shape, will you be able to bring the *Rays* to a proper *Focus* upon the *Paper* that represents the *Retina*.

I must confess *Maitre-Jean* has worded the Paragraph as you mention; but tho' I believe him a very good, nay, one of the best Authors of his Time, yet I know he is often mistaken in his Accounts with relation to the nature of *Vision*, which proceeds from his Deficiency in the Knowledge of *Natural Philosophy*: And this is no wonder, seeing most of the *French* are ignorant of that branch of useful Learning, being generally very voluminous, and very insipid.

If you will please to state the Case, and keep to the Point, I shall willingly answer in the best manner I am able; and if we cannot agree about the Matter, I would have us consent to the Determination of a third Person, well skill'd in Opticks; and no doubt but such there are in *England*, altho' but very few, I fear, otherwise we should not so often see Blunderers rais'd to Dignities which they are not worthy of; for neither *Grant*, *Read*, nor *Taylor*, three Oculists to the Court in the late Reigns, knew any thing of the Matter, which shews how deficient we are in judging of proper Persons to restore us to our Eye-sight, when we want such Helps.

I

to and from Dr. BRACKEN, on Farriery. 13

I shall come to Town yet, and I think to settle at London; therefore I must defer my further Answer to your Queries 'till then, and am,

S I R,

Your's sincerely,

HENRY BRACKEN,

P. S. Pray excuse Haste, for I have writ Post-haste.

Dr. KENNEDY's Fourth LETTER.

I Now freely own to you, Sir, that your second or last Letter of the 7th of *March*, *vouches to me (as you say) for an undoubted Truth to a Demonstration*, that it is unnecessary for me to be much desirous of any more of your Answers on the present Subject, or any longer to continue such an unsatisfactory and unprofitable a Correspondence; which I freely own also, I now almost think I might as well not have troubled myself with: But Men must experience each other first by Correspondence, or otherwise, before they can sufficiently know each other. I might indeed have satisfied myself (perhaps) on this Head, had I read your Books; but 'tis very certain that I read no more of 'em than that Paragraph, or Part, which relates to me; and now, probably, I shall not much incline to examine any further after the *Specimens* of Letters you have thought fit to send me. You *warily* observe in your last, *That you write Post-haste*. Yes, truly, it would verily seem so; and 'tis well if you do not *read so likewise*, if not *when asleep*. In your last, then, you call my *third* Letter my *second*, and my *second* my *first*; which, you say, *you would have answer'd sooner, &c.*

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whereas you had already answer'd my *first* by your *first* some Weeks before ; yet this is a small Fault, easy to be excus'd, in one who *writes Post-haste*. But it appears (I doubt) to a *Demonstration*, that you publish your *Remarks* so also, if not your Books in general. I cannot but at the same time observe, it seems more than probable, that my foresaid late pressing Letter in a great measure forc'd your *second Answer* ; tho' not one Word to the *real purpose* in question, yet merely serv'd to *demonstrate*, that you resolv'd to say something, in order stiffly to deny, &c. (as in your first) you freely own, *that you are a little positive* : It is well if the World do not construe it *Obstinacy* in ——— or even in the clearest case. But in your last, Sir, you observe, *That you found no reason to alter your Opinion*. I do indeed much question that any *Reason*, tho' e'er so *evident*, can bring you to own your *Error*. Could any thing be more *evident, clear and plain*, than what I writ you in my second, to wit, my Answer to your first Letter ? wherein I observ'd, what you *attack'd*, and said in your Book *I was mistaken in*, was, *That of the Desection of the Crystalline Humour in its natural State*, particularly, that *of the springing, or falling out of the said Crystalline*, on cutting its *Tunic, Sacculus, or Capsula* : Of all which you think proper not to take the least notice in your said last, because (no doubt) I had sufficiently prov'd that to be true from your *own Words*, viz, *That the Crystalline is not any ways adherent to the Membranes that surround it* ; and must therefore necessarily follow, that, on cutting the said Membranes, *it must consequently fall out* : Which, as I then told you, was a full Answer (without going any further) to what you charg'd me with being *mistaken*, &c. in your said Book. Yet with *Good-Nature*, inclining to *indulge you*, so to illustrate these *Matters*

ters a little farther, for your more particular *Be-boof and Instruction* in that which you plainly appear'd to be at a loss in. I then also observ'd to you, that it must likewise as necessarily follow, in like manner, *in the diseas'd Crystalline*, as in the *other*, by your own foresaid *Rule, of its being no ways adherent*, &c. I even then, yet farther still to illustrate Matters for your proper Satisfaction, inclin'd to acquaint you with what you seem'd to be at a great loss in, and seemingly intirely unacquainted with; even tho' as said, that you have translated the Author whose Opinion I mention'd you on that Head, and that you had also read my Book, which likewise quotes the same Author and Particular; because as I then observ'd, without some such Indulgence towards you, *there was not like to be any Peace in Israel*. Now, what is the Consequence of all this, or of such a generous Usage and Indulgence, (no way necessary to make good the real Matter in dispute, already sufficiently prov'd from your own Words?) Why, truly, the consequence is, that you think fit, in your said *second Answer*, to drop, and take no further notice of this material Part, or of the real Thing; but, like a drowning or dying Man, you lay fast hold of that which is no way material to the real Thing in debate, (first laid down) but, I say, catch fast hold of that which I gave you as the Opinion of a *noted Author* on that Head, yet at the same time also acquainting you that I reserv'd my own private Opinion on this Head. How is it then that we shall find the present State of the Case? Why, truly, you have intirely dropt or retreated from me, to *intrench* yourself in your *Camera obscura*; or like a *blind Man*, who cannot *distinguish Colours*, or see Things, *threshes all that comes in his Way*, or lays fast hold of any one that happens to be *next him*: and thus you have in like manner laid fast hold of *Monsieur Maitre-*

Jean,

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Jean, and would take him for me; and the great misfortune is, that you would, or really seem not to know it: But then, you are ready to cry out, if this be the case, that you have hold of him instead of me, it must surely in honour lie on me to relieve him. No truly, Sir, I think not; e'en *fight himself*; &c. I have business of my own; nor do I know that I am oblig'd to any such Undertaking. But, alas! Sir, I must as yet acquaint you, especially since you mention *referring the Dispute betwixt us to a third Person, if any such there are (say you) proper*, &c. that the Difficulty or Contest you are now in with *Maitre-Jean* has been long since sufficiently debated *pro & con*, before the *Literati* in *France*, and elsewhere, and on which whole Volumes have been writ; so that it appears to a *Demonstration*, that you are intirely unacquainted with this, as well as with the various Dissertations to the same purpose in the *Journals des Scavans*, on which the said *Literati* have already made their *Decisions*. But had you a little better examin'd my *Treatise* (without reading all these) particularly in *Page 23, 76, 78, 79, and 80*, you might there possibly have found sufficient on this Head, without going further, and thus have prevented all this Trouble. Nor would I suppose you to want one to *explain it for you*, or should you yet think proper to look into it again, I would then *bar* your reading it *Post-haste*. But it seems likewise *strange* you should propose to me the referring to a *third Person* what you have already publish'd as *certain*; but the World (I doubt) will plainly enough *see to a Demonstration*, that your *Certainty* at best is very *uncertain*: Besides that, as I have said, what you propose to refer, properly belongs to *Maitre-Jean*, and his Adherents, whereas you seem to be on the side of *Woolhouse*, probably without knowing your Leader. But
since

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since I here mention *Maitre-Jean*, whom you allow to be one of the *best Authors* of his Time, yet you at the same time observe him to be *often mistaken, as well as very deficient, or ignorant in natural Philosophy*; and that all his Countrymen (consequently he also) *are very voluminous and insipid*. Now, what, in the Name of Goodness, should possess any one (as it seems you have) to translate such an ignorant, dull, insipid Author? tho' all the Harm I wish you is, that you knew one *half as much*. In fine, Sir, I wish you also knew *when, where, and whom to attack*, as well as when to give up. I now must leave you to remain confin'd in your *Camera obscura*, whilst I remain,

Your's, &c.

*York-house, March,
the 16th, 1737-8.
London.*

PT. KEN



Dr. BRACKEN's third LETTER.

Lancr. 19 March, 1737.

SIR,

I Am not so fast shut up in my *Camera Obscura*, or bewilder'd in your Labyrinth of Words, as you may imagine; and, I assure you, I am ready, without any ill-natur'd Language, to enter the Lists with you, and print our Disputes in the publick Papers.

You will wonder if I should guess your Age by your way of writing; yet, I think, I can come pretty near it, tho' I have no other Helps: for I never heard of your being very eminent in the Profession, therefore I might not so well know your Standing, as we term it. Well then, let me see, you are about 55, and therefore growing old, and
C
crabbed,

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crabbed, but not one whit the wiser than you were in 1713, when you published your Book, intitled *Ophthalmographia*, or at least you are unwilling to own it. But, when Jestings is over, I must insist upon it, that the *Crystalline Humour of the Eye will not, in a natural State, on cutting the Tunica Aranea, immediately spring out of its Place*. And herein, I think, I fairly attack and contradict your Doctrine; nay, and I will make it appear too: For I need only take a *Calf's* or a *Sheep's Eye*, if you'll allow the Experiment to be as good, and I think it is, on those Creatures, as human Bodies; I say, I will take one of those Eyes, and with a Needle scrape off several *Laminae* of the *Crystalline*, and afterwards dissect the Eye, when you will find the *Crystalline* in its proper Place. But, perhaps, Dr. Kennedy may say 'tis possible to do this, without cutting the *Capsula* of the *Crystalline*, tho' I believe his Opinion will be sole: I can also tell the Reason why the *Crystalline* does not immediately spring out on cutting the *Capsula* when we couch a *Cataract*. But this may serve for another Epistle, if you desire it.

As to your *Journal des Scavans*, I have read them, as well as most *Physical Essays* which relate to a human Body, and I hope I have digested them, tho' you say I read and write post-haste: And, in my opinion, we must read faster than you seem to write, or else we shall but make a poor Progress in our way of Business: For, if you forget not the first *Aphorism* of our *Leader*, you will be of opinion, that *Life is short*, &c. and that if a Man's Head be truly fashion'd, or *bien tourner*, as the *French* have it, he will easily sift the *Chaff* from the *Grain*, without *splitting Hairs*, as they do in the *Journal des Scavans*.

I can tell you of a Man, and his Name too, that fell thro' the Ice, and was several Fathom under water,

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water, for the Space of six Hours, and after that was taken out living, when he declar'd he heard the Bells at *Stockholm* ring most of the time he was in his watry Element: Yet tho' this is authentically recorded, *believe it who will*, notwithstanding the plausible Argument of the *Foramen Ovale* being open, in this particular Subject.

If you write any more, don't be ill-natur'd; for if you are, I will publish an *Advertisement*, and give you a fair Challenge to answer me, so that the World may judge whether or no I have wrong'd you.

I can't say I read your Book about the Eye over; but I read so far as to find it was published, six Years after *Maitre Jean's*, and that you understood so much *French* as to become a *Plagiary*, which was far enough for

Yours, &c.

To Dr. KENNEDY, at York-
House, York-Buildings,
London.

H. BRACKEN.



Critical Remarks, *by way of Answer*, to Dr. BRACKEN'S *third or last* LETTER.

IT is remarkable in my last, or 4th Letter to this Author, (as there observed) that the two Specimens of Letters he had sent me (the second of which was absolutely forced from him with difficulty) were fully sufficient to satisfy me so far, as not to desire any more of such *idle, frothy, pretending, trifling, and shifting Stuff*, so little to the true purpose (whether from a real *Ignorance*, much to be suspected) or that it was otherwise, made it much the same to me. I was however well satisfied that such a *smart Representation and Ridicule* of his Defence, (as that I last sent him) must either bring him to his *Senses*, or otherwise, at least *spur* him to an Answer (which he so little inclined to,

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as may easily be perceived by his second) and this last effect it had with *full sufficient Speed* ; being it was *instantly answered*, as may be observ'd by the Dates of the said Letters, altho' I in reality wanted no more of any such *wild, bewilder'd Epistles*. Nevertheless, I cannot but say, that this third or last Letter of his satisfied me beyond any of the former, since he, by this, painted himself out more exactly (his Spirit and Metal being now thus raised) he accordingly so better discover'd his *naked Wit and Capacity, Penetration, Obstinacy, Contradiction, Vanity, Forwardness, Memory, Knowledge or Sincerity, &c.* All which still confirm'd me the more not to trouble myself any further with the continuance of such an *unprofitable Correspondence*. Thus then I have rather chose to make my Remarks (to the Publick) on this his third or last Letter, than any other way to answer it ; by which such as incline to amuse themselves this way, or who any way think it worthy of their perusal, may have this Opportunity, and thus judge thereof, as they shall think most proper.

First, then, It is very well known that there are few who are so *closely shut up* in their *Camera Obscura, or Dark Room*, where I left him, but that they will every now and then *bolt to the Grate*, still so to *sputter* in your *Face*, there to *curse and swear*, as also, to continue to give *bad and foul Language* ; so likewise to call you *Names* ; or, lastly, to throw even *the Contents* of their P——ff—— P——t in your *Face*, as a full Proof of the *strongest and best Reason* they are able to give you.

My *Labyrinth of Words*, as he mentions it, is such a *Labyrinth*, (I dare to assert, and do believe, that most of Mankind will be of the same Opinion) that it is fully sufficient to keep him *so shut up*, as never to be able *to get out of it*. But if he would also be understood, as he seems to insinuate, that I
have

have there used too great a Number of Words; I will easily and readily agree, that so many used to some Men might justly enough be reckoned *too many*; but when we consider them as used to those of *lesser Capacity, Penetration and Perspicuity*, or that it proceeds from an *untoward Obstinacy*, or a real *natural Defect*, the Want of *Apprehension*, or the Unwillingness to the receiving of any *just Impressions*, it will then, in such case (I believe) be found to be absolutely necessary to use full as many (not fewer) *Words*; being that such *undocil, muddy, opaque Genius's*, must have the same *Words, Phrases, or Sense*, several times repeated over to them, and perhaps even *variously changed also*, into different *Shapes and Forms*, before they will, or can *rightly comprehend* the Meaning thereof; and even lastly, but rarely, or ever *justly*, to take, or receive the *Whole*.

As to his Assurance of being *ready, without any ill-natur'd Language, &c.* I must refer this Particular to the *Public*, to consider the very *good-natur'd Language* he goes on with in the said Letter; as first, in observing that of *my Age*, my *growing old and crabbed*, my *want of Eminence* in the Profession, my *not being one whit the wiser than in the Year 1713*, calling me a *Plagiary, &c.* To answer him then in his own Stile, (being I never saw him) were I to guess *his Age*, by his manner of Writing, *Apprehension and Judgment, Hastiness, or Testiness*, with the *Politeness* of his *Words*, or the *Crabbishness* of his *Expressions*, I must consequently judge him to be about *Nine, or Ninety*, if not about 100, because old Folks are commonly said to be twice Children.

As to the Word *Eminence*, he is pleased to make use of, *particularly* in so far as it relates to the *Profession*, this seems to me to be such a most *notable*, and so very *copious* a Field, that I could, methinks, write a whole Volume on this exten-

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five Subject. I shall however, at present, content myself with the few following Hints thereon, *viz.* *First*, That I had examin'd nothing with regard to his *Eminence*, or that of his *Standing*, when I first writ into *Lancashire* to him, otherwise I might probably have saved myself that Trouble ; but so far from having the least Thought or Consideration of his, or any other Person's *Eminence*, who in some remote Corner might apply himself to the patching up a Treatise of *Farriery* (tho' even filch'd) from the principal Authors on that Subject, for the Use of such country Folks as know no better ; yet had he, I say, been a *professed Farrier*, who had been idle enough to gather together, out of others, such a *Jumble* to make up a *Book*, whom nevertheless I could at the same time any way imagine to have the least *good Intention* ; any one such then, I say, being pleased to quote a Passage out of any Treatise written by me, and which *Passage* he judg'd, and publish'd as *erroneous*, at the same time seeming to allow the rest of the said *Treatise to be good* ; I should from thence imagine, that he meant *no ill*, and so readily conclude, that he deserv'd to be *writ to*, and I would accordingly endeavour *to set him right*, by a Letter on that Head, merely out of Good-nature and Humanity, as well as from a *Love of Truth*. Thus to set a *bewilder'd Stranger* in the *right Road*, and from a Desire, at the same time, that the rest of the heedless part of Mankind might not follow such a *strolling Guide*, or in the least to be *led astray* by any such. But now, to come yet a little closer to the word *Eminence*, I must own I should not have been displeased that he had given us his own particular Definition thereof, (being he may have affix'd some *special Ideas* of his own thereto, beyond the common.) However, as to my own particular, I must freely own,

own, I trouble my self very little (or not at all) about the *common Name*, or *the Title*, which a Man receives in the World, whether by *Custom*, *Favour*, *Interest*, &c. or with that of the *Show and Figure* which he makes, or even that of his great *Flutter in Business*, or the *common Vogue and loud Cry* that runs after any such Person, since he may, for all this *Show, Noise and Flutter*, be little or no better than a *pompous Charletan* in a *splendid Equipage*, &c. No, no; these are not in the least any of my Considerations, or what I have the least regard to, with such I incline to correspond, or reap the least Instruction from, since it is that of a real Knowledge in what a Man pretends to, and ought to understand: Let him be e'er so *obscure* in the most *private Cottage* or *Garret*, tho' even there in *Rags*, I shall rather endeavour to do the *Justice* due to such *Merit*, and be at least *sorry* he remains so much *bid*, and so much *neglected* by the World, the Fate of many, perhaps even the *greatest Men*. What is it to me, that a *rattling, fluttering, hurrying, bustling, cloudy-pated, confused, or gravely vain* Fellow, makes the most *pompous Show*, either in his *Equipage*, or manner of living? is greatly *sought after*, and admir'd too by *Town and Country*, nay has even all the fine *Titles too*, as well as of the *longest standing*, and thus to be regarded by the *unthinking Town*, and with the *unpenetrating Country-Folks* to be that most deservedly *eminent Person*; when at the same time, I say, upon a *due Scrutiny*, I do in reality find there is little of that true Knowledge in him, or of that he pretends to, and should know. Are not, or ought not, these rather to be greater Proofs that he deserves only, for such, to be the more contemned and despised? Thus, should the *Apprentice Boy* of a *Surgeon* or *Apothecary*, of but a *Twelvemonth's standing*, know more of *Anatomy* or *Physick*, than our busy, pre-

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tending Critic, I should esteem and conclude the former to be the most *valuable*, (nay, in *my Eyes*, the more deservedly *eminent* too) and that the latter only deserv'd to be *laugh'd* at for his *Titles*, *Long-standing*, or any other kind of vain *Eminence*, if he had it. In this manner it is then, that the Reality, not the *Names* or *Shadows* of Things are only sought after and regarded with Men of real and *true Knowledge*. But now, as to my own Particular (especially in this way) has not my Treatise of the Eye been well enough received in the World? Nay, has not even he himself allowed and own'd it under his own hand to be good? What is it then properly he has further to do with? or what has he to do with *this Eminence*? However then, even to give some Answer to this improper and *impolite Question*, without, at the same time, supposing myself to be any way like some Men of the *greatest Merit*, who (as has been observ'd) have often had the *least Interest*, so (generally) they have also had the most *Enemies*, particularly in all *corrupt Societies* or *Times*; yet without, I say, in the least apprehending this to be my Case, if he judges of *Eminence* by the Greatness of the Practice, even *Galen* himself, that *great Author*, and *Father* of the *Profession*, had nothing near so much Practice as at that time a certain *Roman Physician*, now hardly known. Nay it is even a question, as suppos'd, whether *Galen* was ever Physician to the *Emperor*; or, if he was, what would that prove? Is not Dr. T——r, O—— to his M——? &c. *Ratcliff* surely had much more Business than any of the *King* or *Queen's Physicians* in his time: Thus they were more *eminent in Honour*, whilst he was so in *Practice*; nor would he, as 'tis said, accept of that *eminent Station*. How little then even some others, any more than he, may *esteem*, or value *Titles*, *Names*, or *Places*, thus to acquire such
Eminence,

Eminence, may be the Question? That so very celebrated Author *Celsus* also is question'd whether ever to have practised; nor had he any *Titles*, that we know of: Yet, as to my own particular, who is it that can pretend to determine, or say, whether it may be my *own Fault*, or that of the Neglect of the *Public*, that I am not in the middle of more *bustle* to be sought and *run after* with so much *Noise* and *Hurry*? Or is it that this excellent Correspondent thinks I ought to run about the Country seeking for Business, so to be more heard of in this way? or, if not this, must I, to oblige him, (or to form him *proper Ideas*) strongly push for it, and greatly crave it, even in Town? Supposing I now should incline to live *without Business*, or be indolent, or otherwise incline to divert myself greatly with *my particular Pleasures*, or that I should not much incline to be employ'd, unless *better paid* than the *usual*, or to have a more considerable Consideration at once, for putting others, who desire to attend more in common Practice, into the *most proper, safe, and shortest Method*; (tho' the World may not so readily come into any such Scheme;) or if, as yet, that I incline to be gratified, as *Lawyers* are, before-hand, so better to judge of the Equivalent, for putting them in some such like *easier method of cure*, and that I incline not over-closely to be *pinn'd down to common Practice* and Attendance, according to usual Form; how stands it then? Or if it be that my Interest in the World be not sufficiently strong, (so to be well recommended,) or that I am some how *defective in the knack of pleasing* (any more than I am him) other *pretending People, Patients, Potbecaries, or Practitioners*; or that I would not willingly be so over-much mark'd out in this or any such like particular way, (as I had before hinted to him in my Letter,) being, as I then told him,

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him, I pretend equally to understand the other Maladies of human Bodies : Now, does all this then prove my Error, or defect of Knowledge in what I have writ, or pretend to ? or, is it any Proof of my want of *Eminence* in this way, because I have not made a greater *Noise* or *Bustle in Town and Country* ? And yet, notwithstanding all this, I should have been obliged to him, that he had inform'd me who there is in our *Dominions* that has writ better, and is more knowing, or is more *eminent* in this Way, even since the time of my first publishing that small Treatise ? All which I should incline to refer to the most judicious, of whom I must at the same time *ask Pardon*, for saying this much of myself, which I know is not an agreeable Subject to the World in general, but that I hope it may prove the more pardonable, as being so forc'd and oblig'd thereto, thus to advance so much in *my own Defence*, a *Necessity* which has *no Law*. I might likewise further observe, that I had in my former *Letter* acquainted him, that I had long since entirely left off the *performing of any Operations*, which for the most part carries a good deal of that kind of Business along with it ; but, before I entirely finish this Affair of *Eminence*, I should be glad to know also how this critical Author could possibly be so *very weak*, as to quote any Author or Treatise (to a vain Pretender to the Discovery of Novelties) as he did mine, and at the same time to upbraid him with not *reading or understanding it*, unless, I say, he judg'd such Author sufficiently *eminent*, and worth the mentioning. And now, to lay aside any further Observations on *Eminence* in this Profession (tho' I may perhaps anon present him or others with a particular *Receipt* on that Subject for their further Instruction and Government in this way) I shall now then leave it, and, in the next place, observe, that he after this takes
notice,

notice, that, *tho' now old and crabbed*, yet that I am *not one whit the wiser than in the Year 1713*. I have before spoke of the first Part, to wit, that of *old Age*, &c. Now, as to the latter part, to wit, that of *not being any wiser*; — no; truly *not in that particular*, I freely own, *I am not*; nor can I possibly desire to be more so, than the true Knowledge of the thing will admit of, to wit, the *furthest and greatest Demonstration of Truth*. But here it may not be amiss I take some notice of his pretending to answer somewhat to the *Affair in dispute*, before I make any further Answers to his *Billingsgate Stile*, tho' the one is in reality as *trifling, dull, shifting*, and *chicaning*, as the other is *rude and abusive*. However, he being still willing to say something, as one whom we say *dies very hard*, now finding himself to be so *hard set*, and thus to be entirely drove from all his other *Fences or Resources* belonging to *Maitre-Jean*, whose Works 'tis plain he did *not know or understand*, tho' he pretends (in his Book) to have *translated him*; yet finding, I say, to his *great sorrow*, that he was now forced to leave these *dear trifling, gallymafry Resources* (nothing at all to the real purpose, but merely for the sake of saying something) he now here then, in this his last, would pretend to come a little more to the real purpose *in dispute*, tho', in truth, still a downright *Shift*, as well as the *former*: Yet here, however, he would pretend to come to the *Anatomical Point in dispute*, which I had more than once observed to him it entirely *turn'd upon*, and on which he is pleased to compliment me, in his second Letter, *that I must have laid out my Talents very well in Anatomy*; yet, unluckily for him, this of *Anatomy*, which he has no way discovered his tolerable Skill in, is the only Part of the Book that he has pretended (or chose) to *criticise on*; much like such who would vainly value themselves the

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the most, on that which they are the weakest in, or know the least of. Well, let us hear then, *The Crystalline Humour of the Eye, says he, will not in a natural State, on cutting the Tunica Aranea, immediately spring out of its place.* Now this honest Gentleman being (it seems) so very much in Years, that his Memory here altogether fails him, and cannot consequently reflect that he in this most plainly contradicts himself, (unless yet still to call in a little further help of a *shameless Shift or Chicane*, as he evidently *seems to do*) being he has (as before observ'd) in his former allowed and declared, *that the Crystalline is not any way adherent to its Membrane or Tunica Aranea.* If so then, as we have likewise *already said*, what in the Name of Goodness should hinder it from *falling out of this said Tunic, Membrane, or Sacculus, on its being sufficiently laid open?* Well, but then, our *shrewd, shifting, philosophick Sophister* has got a *Salvo* for that too, and herein lies his *notable Chicane*; for he intends to take a special care not to have it sufficiently laid open, *lest it should so fall out*, tho' I should be glad to know why, on dissection of this Part, it should not be sufficiently *so laid open.* Thus (as has been said) he chooses to go on, because he would still have something further to say, more fully to demonstrate how very little he knows of the matter, and indeed to prove more fully and plainly, that he has never *dissected a human Eye in his whole Life.* Well now, be it so then, as he appears to be more conversant with Cattle than with human Bodies, he is thus consequently willing to beg the question; and so the better to prove his *Assertion*, and at the same time *me to be wrong*, he will make choice of another Subject than what I *speak or write of*: That is, he will prove it (says he) by a *Calf's or Sheep's Eye*, being he concludes the Eyes of those Creatures to be exactly the same

same as those of human Bodies; which also proves how very little he knows even of *comparative Anatomy*. Now not allowing them to be the same, how then? since differing, I say, in several Particulars, besides the *oblong Form of the Pupil* in such *Animals*, which of course will render it to be much more easy for him to perform such an Operation, as he would willingly undertake; or pretend to, (tho' not in the least any way to the purpose.) Well but now I find, notwithstanding all that's here said, he still much inclines that I would not be *so crabbed*, but favourably and kindly to admit of his *Proposal*. Well then, be it even so, I will now *so far indulge him* with his *Calf's or Sheep's Eyes*, as to suppose them to be little or no way materially different in the Particular *spoken of and in dispute*, to wit, that of the *Crystalline, with its Membrane*: Very well, and this now being allow'd, how then? Why, truly, our *nice Operator, or delicate Anatomist*, is to introduce gently *his Needle*, and then (says he) *so to scrape off several Laminæ of the Crystalline, and afterwards dissect the Eye, when you will find the Crystalline in its proper Place*. Now, observe him well, what a most excellent *Speech here is*, made by our *special Operator and Anatomist*; tho' I would earnestly beg to know, what, in the name of wonder, is it *this busy Needle* has still to do in this Affair, spoken of in *my Book*? On a full Dissection of this Part, viz. the *intire and naked Discovery of the Crystalline*, by laying its *Membrane or Sacculus sufficiently open* for that purpose. Or what, for God's sake, has this *scraping off several Laminæ of the Crystalline* (with the said Needle) to do in this? But, notwithstanding all such *trivial Objections*, we are, nevertheless, still most willing to go on with our *Story*. Well, and how then? Why truly, we would sily, and most carefully, as well as very dextrously, *slide in*
our

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our foreſaid *valuable Needle*, ſo to ſcrape off the *Lamine* of our *Calf's Eye Crystalline*; and having done this, we would then, even as dextrouſly, *ſlip it out again*, without doing any farther *Miſchief*: And this would be our Method of diſſecting of a *human Eye*; and our way of fully and ſufficiently proving (to our own Satisfaction) our *Criticſm* to be *juſt*, and that our Adverſary, whom we have ſo judiciously *criticiſ'd on*, muſt apparently and unqueſtionably be horridly *miſtaken*, and quite *wrong* in his Diſſection of *theſe Parts*, or that of a *human Eye*; ſo very evidently demonſtrated on our *Calf's Eye*, by our moſt accurate and *peculiar Method of diſſecting*. And this is the Manner of reaſoning of this *admirable, critical Author*, and *ſingular Diſſector*; which you'll be pleas'd to allow is not ſo greatly amifs for one ſo *confin'd* to his *Camera Obscura*. But to go on, and to prove, yet more fully, ſuch *Diſſection of the human Eye to be intirely falſe*, as mention'd in our *Farriery*, and now ſo duly *chaffized by us*; we alſo think proper to throw you in the Hint, *that we can alſo tell the Reaſon why the Crystalline does not immediately ſpring out on cutting the Capsula when we couch a Cataract*. Excellently well ſhot again, (an unparallel'd *Markſman* indeed) yes truly; but *this* (continues he) *may ſerve for another Epistle, if you deſire it*. No, by no means, my dear Sir; I moſt heartily beg you would not put yourſelf to any ſuch unneceſſary trouble on my account, ſince I muſt indeed freely own to you, I have had full enough of 'em; even tho' we ſhould have ſuch notable Remarks why *Cataracts* do not *drop or ſpring out* of a *Calf's Eye* on diſſecting it, for the diſcovery of the *Crystalline Humour* of a *human Eye* only. But, in reality, he thinks it ſomewhat hard this *fine Story* ſhould not be heard; ſince all along, whiſt in his *Camera Obscura*, his Head has been ſo very full of this *Maladie*, to wit, *Cataracts*, which ſo ob-

ſtructs

structs the *Sight* when he dissects the Eyes of *Cattle*. But now to proceed yet a little further on our present Letter ; let us even *ramble* somewhat further on the Subject of our great reading. He now then, thinks proper to acquaint us, that he has read all those Works, the *Journal de Scavans*, as well as most *physical Essays* which relate to human Bodies, (for he speaks not now of *Quadrupedes*, nor of *complete Treatises* or *whole Works*, but of *Essays* only.) However, *these he hopes he has digested well*: And so truly it would seem, by his Letters here writ, &c. The next thing then he is pleased to observe, and find fault with, is, that I do not *write faster*, or *not enough of it*. I know not how much *too slow*, or *too little* I may write; but 'tis well if some may not find fault or make *sight* of my having writ *so much*; so that it will be a hard matter to please all Parties. But now how very well his Head is truly fashioned, and *bien Tourner*, which he mentions; or how fit it is for the *sifting of Chaff*, I will not pretend to determine: but I'll agree with him, as he seems to admit, that it is altogether unfit for the *splitting of Hairs*, as they do in the *Journal des Scavans*. And here our singular Critick seems only to fall upon the principal known *Authors* or *Litterati* in the *World* in our Age; since the *Journal des Scavans* is only a Collection of their principal and most curious *Accounts* or *Observations*. But why should not such Freedom as this ('tis true) be allowed to one shut up in his *Camera in Lancaster*? Well, since so then, let us e'en yet *ramble on* more fully to prove the Folly of these *hair-splitting Messieurs*, as well as that of the *Gasconading Swedes*. He here then observes the Ridiculousness of that Account, related by them, of the Man who 'tis said lived so many hours under water. And here he seems willing to take an Opportunity of letting us know, that he has heard of such a Hole as the
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Foramen Ovale (still open in this Subject.) But had he likewise observed to us (at the same time) the *Ductus Bottali* or *Arteriosus*, and that it also remained open on that occasion; he, perhaps then, would not have found his Assertion (so strongly attested by such learned Vouchers) to have appear'd to be so *very ridiculous*; at least such Knowledge might possibly have, at least, induced him to be a little more inclinable to have suspended his Judgment on the Subject, without believing himself obliged to take the Sacrament for the Veracity thereof. And as to that of the *bearing of Sounds under water*, were he (appearingly) better acquainted with the Doctrine of Undulation, communicated on or through different Fluids or Mediums, probably that also would then prove to be far less wonderful to him.

He, after this, thinks proper to exhort me, that *if I write any more not to be ill-natur'd*; for if I should *be so*, he then threatens to *publish an Advertisement, to give me a fair Challenge to answer him*; so that the World, says he, may judge, &c. What! so very ready to *challenge* a Person not *sufficiently eminent*? But that matters not now; we are grown *very angry*. Well, if so, I must leave the World to judge whether I have much reason, after what he has writ me, that I should nevertheless write to him in the *best-natured and most pleasing Stile*? Yet I hope it will, at the same time, be observed, that I appear not, in writing this, to be greatly out of humour: And as to the *threatening part*, which relates to the publishing of *this Dispute*, he will by this here find, that I have saved him that trouble, being thus willing to oblige him in the publishing it for him. However, if he should not so greatly relish the whole, let him e'en blame himself for having forced me to this Extremity. But now come we to the last Para-

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graph of his Epistle, by which he would seem willing to insinuate, that he had *not read my Book over*, thus to be even with me for having said *that I had not read more of his Book or Books than that Paragraph or Part which relates to me*. But here again, this very unlucky, poor Gentleman seems more fully to prove his Age, alas! far too much, by the great Failure of his Memory (which now it seems evidently decays daily) sufficiently here proved: I say, by what he writes in his first Letter; when he says, *for you'll observe the Expression*, page 185, *where I say Dr. Kennedy is mistaken in one Particular, which* (continues he) *is in effect saying the rest of your Performance is very good, as I really think it is, &c.* How! only guilty, or mistaken in one Particular, which is, says he, *in effect saying the rest of your Performance is very good, as I really think it is*. What! *Mistaken only in one Particular, the rest very good, as he really thinks it*; and yet all the while never to have read it over? This I doubt will appear somewhat mystical to the Publick; especially if they should not favourably construe it *decay of Memory*. Well, but let us then try a little, if in going on yet further he any way better explains himself on this Head. Thus he goes on, in the same Letter, *I now assure you under my Hand (that so far as I am a Judge) you are both a good Author and Compiler, therefore pray be not displeas'd at me for mentioning you in my Book, as guilty only of one Mistake*. How then? *both a good Author and Compiler.—Guilty only of one Mistake*, and still never to have read this *Author over*, is full as mysterious as the former, unless more excusable by what has been hinted. But then, indeed, he also thinks proper to add, *since I am not, neither pretend to be infallible*. Most undoubtedly so, truly; and that it will too plainly, in all likelihood, so appear to the Publick; but then it were likewise to be

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wish'd that you were not quite *so positive* as you freely own yourself to be. The next remarkable Observation is, that my Book was publish'd some Years after that of Monsieur *Maitre-Jean*: Very well, and who doubts it, or pretends to dispute it? Do I not, with *credit*, quote that *Author*? Translate or introduce his new Opinion of *Cataracts* (its being the very Body of the *Crystalline*, which in that Operation is intirely depress'd) representing such his *new Opinion*, in the most advantageous Manner. How is he then, or could any one suppose my Book to have been writ before that *Author's* Book, which I there quote in the Manner spoken of? Well, but the grand, home Charge then is, that *I am a Plagiary*; a very heavy Charge surely: Yet had I, methinks, only (at that early time) translated or abridged that *Author*, whether with or without such new Opinion, I cannot perceive it would or ought to have been the least Reflection on me now; or even if I had found or taken any thing from him that was good, why should I not? Especially, since I there mention him *with Honour and Regard*, or even without criticising on the *Novelty* of his *Opinion*. Yet any one who has his Eyes yet open, or a common Understanding free, may plainly observe, that I do not even there adhere to, or positively affirm or determine such his *new Opinion*, that principal and most remarkable Part of him, to wit, That of the Body of the *Crystalline* being *intirely changed*, and in the Operation is wholly *beat down, or depressed*, (which our Critic, and Translator of the said *Author*, is so much a Stranger to) I do not, I say, either affirm it to be false or true, or so much as to determine, whether that or the former Opinion be the most just, or the most to be depended on. Nay, it is, I think, sufficiently evident, I give several Accounts of *Cataracts*, and the operating on such,

together

together with the proper Observations on them, whether more successful, or unsuccessful, which are entirely different from any thing in him; or any other. That there is likewise an *Anatomical Print*, as well as that of the Representation of Objects to the Eye, both which this Author is entirely without, not having any one Print in his Book. The Account of the Anatomy of that *Organ*, as well as the *Theory of Vision*, being greatly differing from his; nor to be said from him, or any other *particular Author*, much thereof being properly *my own*; &c. Neither has he any Thing relating to the Affinity or Communication of the *Maladies* of the *Ear* with that of the *Eye*; as in my *Treatise*; so that the whole, whether good or bad, is on an entirely *different Plan*, and is, no doubt, from the Reasons observed, an *entirely different Treatise*, Upon which; nevertheless; I no way value myself; as I have already observ'd to him: But since he is here pleas'd to mention *Monsieur Maitre-Jean*, and that he acquaints us in his *said Farriery* that he has *translated his Book*, and added *Annotations* to it (which has even been offered to the *Booksellers*, tho' not so readily accepted of) at the same time; I say, falling on in the most violent manner; upon T——r, his M—— O——st, and this noisy Itinerant, possibly not over-able to make good what he had advanced, tho', for aught I know; he might even likewise be able to say something to this, now so commonly known, (from the foresaid Author) yet whether he could or not; or whatever his other vain, audacious Pretensions may be, I will nevertheless (at least for the sake of Truth) shew this *rash Critic*, that *even this*, which that forward blundering Person advanced (in that Particular) it was only an Opinion taken from *Monsieur Maitre-Jean*; and that *our Critic*, in thus abusing of him (in that Article) he thus consequently abuses the said honourable and learned

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Author, whom he pretends to have *translated*. The Words then of this very notable *Translator and Critic* in his *Farriery*, Page 109, are these, — in the Operation of couching. ‘But it is Folly and Madneſs to imagine with *T—r* the Oculiſt, that the Cryſtalline Humour is quite turn’d out of the Cavity it makes in the Vitreous in ſuch Operation; and that the vitreous Humour becomes convex in its place. I ſay, this is (for Reaſons too plain to be inſiſted on) talking more like a quacking empirical Fellow, than one vers’d in Opticks. And Page 15. he alſo ſays, — made Dr. *T—r* imagine, that he turns the whole Body of the Cryſtalline out of its place when he couches a Cataract.’ — Now, let us next then obſerve the proper Words of *Monſieur Maitre-Jean* (whom this ſpecial Critic has *translated*, Page 99.) ‘Dailleurs le Cryſtallin ne peut être détourné, qu’en même tems le corps vitré n’occupe ſa place, comme je le prouveray ci-apres, & ne forme une boſſe ronde qui imite en quelque façon la ſurface antérieure du Cryſtallin.’ — Now without *translating* this for him, being he has, he ſays, *translated* it (and a good *Translation* it is too) what then has he to pretend to, after ſeeing theſe Words ſo very plain in that *Author*? unleſs it be that his Memory now, alas! greatly fails him. But ſince he has alſo given me a freſh occaſion of looking into this ſame *Author*, it may not be amiſs I now likewiſe hint, having neglected, or not obſerv’d in my former Letters, what is mentioned in this ſame *Author*, in relation to my mentioning the ſpringing out of the Cryſtalline Humour, on the cutting of its *Sacculus* or *Membrane*: His Words then are, Page 41. ‘Je fends enſuite en quatre parties, avec la pointe de la Lancette, la membrane qui couvre le Cryſtallin, apres quoi le Cryſtallin s’échape de lui même.’ — I might alſo mention

mention out of the same Author, to prove yet more fully his Opinion, spoken of above, in relation to Cataracts, as in *Page 123*, where he says, — *Mais une alteration entière de tout le Crystallin, qui change de couleur & perd sa transparence, & que c'est ce Crystallin ainsi alteré qu'on détourne avec léguille.* But now e'er we entirely finish this Affair of the *Plagiarism*, let us try a little how far we can turn the Tables on our notable Accuser. Let us now, I say, make a short Excursion on the *Afric Coast*, without carrying our Resentment to the very Gates of *Cartbage*, or endeavouring the entire Demolition of that *proud City*, but rather to bombard some more modern small pyritical Fortrefs there. First, then, I shall wave the other parts of this Author's Treatise, nay even that of the Eye, only some little Part thereof, such as may serve as a Specimen of the rest; tho' I must in general observe, that he has not thought proper to take the least notice of a *Horse's Eye* in particular, or spoke of *comparative Anatomy*, only to have such account of a *human Eye*, as he thought would serve his purpose. I shall then take notice, that altho' I was well persuaded that this Book of his was only a *scanty Hotch-potch* of the noted Authors (before him) on that Subject; yet I could scarce have imagin'd him to have been a *shameless Plagiary*, even of, or from him he had the Assurance to call so, or rather to *downright pyrate him* (as Booksellers term it) for to be a *Plagiary* from him he charges to be so, nay, even most *shamefully to pyrate him*, without owning it, is surely the Devil. Or for a *Jockey* to steal a Man's Horse, and then pretend to *sell him to the Owner again* (in an open Market) without at least *disguising him a little*, with a *false Tail or Mane* fasten'd to him, is certainly a most consummate piece of *Assurance*. I shall then observe, I say, that as I was well convinced he had made very free on this occasion with

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the Authors before him on such Subject, my Curiosity led me (on his calling me a *Plagiary*) to examine whether he might not have made somewhat *free with me* likewise; more especially, since, by his Letters, I could now pretty easily *fathom his Depth*. This then engaged me to look into his Account of the *Eye*; which, I readily own, I no sooner look'd into, than I streight began to shrink at the Thoughts of criticising on the *Faults* contain'd in *that part alone*, or even to follow closely this so very bare-fac'd *Plagiary*, who had so plainly *filched the principal part thereof out of my Treatise on the Eye*; so that I could not think of troubling myself with the whole; and therefore (not to tire myself or Reader) shall only choose to produce a few Specimens thereof; after which, I shall leave the Reader to *compare*, or to fish out the rest, if he inclines it: For my own part, I do declare, I had not any longer Patience therewith. It is however to be remark'd, that here and there he has added a few idle Words, by way of disguising it somewhat; yet, for the Ease of the Reader, I have mark'd, or put most of such Words betwixt *Crotchets* []. First then, instead of a *Horse's Eye*, he rather chooses to give you the comparative Anatomy of a *human Eye*. To begin then, page 101, where as to the *Pia Mater* or *Choroïdes*, or both, being in the *Inside of the Optick Nerve*, that I allow to be *his own*. *Choroïdes* (says he) — from the *Pia Mater* or *thin cobweb covering of the Brain, which is expanded all along the Inside of the Optick Nerve, and terminates in the Choroïdes*. Having allow'd this then to be *his*, let us next observe that which I own to be *mine*. Page 110, (of his last small Edition, 1738) he goes on in this manner, speaking of the *vitreous Humour*, — ‘It is spherical behind and in its Middle (this
‘ spherical behind and in its Middle, I must yet still
‘ allow

allow to be his) ‘before, it is concave, [† or hollow] ‘and in the Cavity the Crystalline Humour lies.’ Whereas I say in my *Ophthalmographia*, page 16. *it is spherical behind, and in its middle before it is concave, in which the Crystalline Humour lies.*— Then he goes on ; ‘The Vitreous is a transparent ‘Substance, not so hard as the *Crystalline*, or so ‘fluid as the *aqueous* [or || watry Humour] and it ‘seems to be nothing else, but a number of delicate little Vesicles [or ¹ Bladders] full of Water ; ‘for, in touching, it is always moist and waterish, ‘and, when cut, the [² Mixture] flows out more abundantly ; or by rubbing it betwixt the Palms ‘of [³ one’s] Hands the Water comes out, [⁴ and ‘to such a Degree] that it will appear nothing but ‘a Membrane, [⁵ or thin Skin ;] and by observing with a Microscope [or ⁶ Glass, commonly ‘called a magnifying Glass,] when [⁷ it is] cut, ‘you will [⁸ observe] many little airy Bubbles to ‘arise from it ; but, being dried, it evaporates [⁹ or flies away,] and this delicate membranous ‘Body [¹⁰ seems] almost withered to nothing. [¹¹ The] use [¹² of the vitreous or glassy Humour] seems chiefly [¹³ design’d] to keep the ‘Crystallin at [¹⁴ a] proper Distance from the Retina, as I shall [further explain] in speaking of ‘Vision.’—— Admirably well indeed ! Whereas this last Expression is in mine, page 17. as I shall shew in speaking of *Vision*. Thus I must also own the rest in a manner *verbatim to be mine*, unless where confounded with such silly impertinent

† This (or hollow) is his Note or Explanation of *Concave*. || Another Note, or Explanation of *aqueous*. ¹ Another Explanation. ² Here is an admirable *Mixture*, I wish he had notify’d of what ; in mine ‘tis *Moisture* : Nor is his an Error of the Press, since so in both Editions. ³ One’s Hands, for *your Hands*. ⁴ Addition. ⁵ Explanation. ⁶ Further Explanation. ⁷ Addition. ⁸ *Observe*, for *see*. ⁹ Explains *evaporate*. ¹⁰ Seems, for *is*. ¹¹ The, for *its*. ¹² Addition. ¹³ Addition also. ¹⁴ Addition likewise.

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Words as are mark'd with the *Crotchets*, which will be more observable in comparing mine with his. After running on then with a *Rigmy-roll* Digression to the Jockies, he again proceeds, ‘[¹⁵ The vitreous or glassy Humour] has a very fine and thin Membrane [¹⁶ or Coat] with which it is cover’d. • This Membrane is adherent [¹⁷ or joining] to the *Ligamentum Ciliare*, and no doubt has its Blood-Vessels, as well as the other Membranes of the Body, which must be nourished by Blood-Vessels [¹⁸ from thence] altho[ugh] so fine and small that they are not to be seen [even with a Microscope;] yet this need not seem strange, when we consider, that those of the *Cornea*, [though] they are much larger, are not to be seen till they become turgid, [or swell] in an Ophthalmia [or Inflammation of the Eye] or even those of the *tunica adnata* [or White of the Eye,] ’till inflamed, as I have said. [Now,] whether [there is any] Communication between the vitreous Humour and the Crystalline, is what [∴ Anatomists] cannot determine: But this is plain, to wit, that its Membrane or Coat is not only continued or adherent to the *Ligamentum Ciliare*, but likewise to the *Tunica aranea*, or Membrane which immediately covers the Crystalline Humour.’ ——— Now, without troubling my Reader with any more of this kind of *Anatomy*, let us just peep into a little Specimen of his *Theory of Vision* likewise; more especially since, as above, he tells us, *he would further explain himself in speaking of Vision*. Page 113. he says, ‘¹⁹ It is not my Design at present to write

¹⁵ Additional Improvement, for it; speaking of the same Humour.

¹⁶ Explanation of Coat, for *Tunic*. ¹⁷ Explanation for *Adherent*.

¹⁸ The Words transposed for the worse, leaving out as also the little *Vesicles*. Thus then the rest of the Description of this Humour is in like Manner, as is mark’d with *Crotchets*, without further Observation thereon. ∴ In my Book it is, *is what I cannot determine*. ¹⁹ My Words are, page 22. I would not have the Reader

‘ write a distinct Treatise upon Opticks, but only to
 ‘ shew the Reader so much as is necessary to shew
 ‘ how light is performed. Page 114. he goes on,
 ‘ — ²⁰ Light, or what I mean by Rays of Light,
 ‘ are no doubt a subtil Fluid that moves quick, and
 ‘ is continually emitted from the Sun or luminous
 ‘ Body; its Motion may be observ’d by the Re-
 ‘ flection on solid Bodies, and the Refraction it
 ‘ has in passing through a *dense medium*, such as
 ‘ Glass. — ²¹ Light, tho’ of extremely small
 ‘ Particles, according to the Demonstration of
 ‘ Mr. Romer, from the Eclipses of *Jupiter’s* Sa-
 ‘ tellites, finishes its Progress from the Sun to this
 ‘ Earth in about ten Minutes of Time.’ — Here
 he recommences the same Section again in mine,
 saying, — ‘ Light then is that *materia subtilis*
 ‘ sent from the Sun or luminous Body in Lines or
 ‘ Rays, commonly called Sun-Beams; † and these
 ‘ coming with such incredible Swiftneſs, [and]
 ‘ meeting the Eye, (*page 115.*) properly and won-
 ‘ derfully disposed with convex and diaphanous
 ‘ Mediums, the better to receive [such Rays] can-
 ‘ not but strike very sensibly upon the fine medul-
 ‘ lary Fibres of the Retina; but whether it be
 ‘ communicated to the Soul by Undulation or Vi-
 ‘ bration, ‡ is what I shall not pretend to deter-
 ‘ mine.’ — *I believe not truly.* Well, in a word
 then, not to trouble and tire my Reader or my-
 self too much, I shall only shew that he in general

der expect that I am to write a whole Treatise of Opticks, but
 only so much as may be necessary to shew how Sight is per-
 formed. ²⁰ The very next Paragraph in my Book, excepting
 some Words here altered or left out (for the worse) in the Be-
 ginning, is otherwise all the same. ²¹ This differs no way ma-
 terially from my next Paragraph, unless to turn *Monsieur Ro-*
mare into an *Englishman*, viz. Mr. Romer. † Here, after a
 little transposing, as we have said, he goes on in a manner ver-
 batim to the End; ‡ only here is omitted, *To make the Im-*
pression called Light; which renders it *better Sense*, or more
intelligible. But then surely the Reader must allow, that such

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ral runs on in much the like manner in the rest of his Account of Vision, as those who are any way desirous will observe, on comparing his with mine. I shall here then only a little further hint how the following Sections begin in the foresaid Page,—

‘ || The Eye may be considered as a *Camera obscura*, or dark Chamber, [to make which,] shut the Doors and Window-Shutters [of a Room very tight and close,] so as no Light [be admitted] to come in, but by a small Hole in one of the Shutters.’— The next goes on in like manner.— ‘ Thus it would do upon the *Retina*, altho’ there were no Humour [in the Eye,] neither crystalline, vitreous or aqueous, [no,] nor even the Cornea.— And the following Section begins, ‘ For example, a Lens [or spherical Glass] we may suppose to be the crystalline [Humour] behind the Pupil [or Sight of the Eye; I say, such Glass,] being plac’d betwixt the Hole and the Paper, will make the Rays converge. — The next, being page 116. ‘ If the Lens or crystalline Humour be too far from the Paper or Retina, the Rays will intersect [or cross one another] before they arrive there, and afterwards come divergent [or dispersed] upon the Paper; so that, —’ N. B. He, in the following Section, also speaks (as I do) of *Presbitia* and *Myopia*, for which Maladies in Horses, ’tis to be hoped, he will contrive and find out a proper Method of relieving them, by the wise Use of convex, or concave and meniscous Glasses, according to their different Occasions; for which, I dare say, there is ne’er

a well-remodel’d, and well-explain’d Theory of Vision as this, is sufficient for a Horse. || In a word, excepting such idle Variations, as may be observed by the *Crotchets*, it is all the same as in mine, which he has most servilely followed; only that few would allow Spectacle-Glass to be either *Lens*, or like the crystalline Humour in its Form. The rest of the Paragraphs

to and from Dr. BRACKEN, on Farriery. 43

ne'er a *Jockey, Gentleman, or Lady* in *England*, but who will be greatly pleased therewith. But now it seems high time I should finish these my Notes on *Plagiarism*; and, by what has been said, it may be observ'd how very || free he has made in *pyrating, or borrowing my Labyrinth of Words* when it suits him. Well, and was this then *without reading of my Book*? Surely this is *reading it* with a witness, more likely a getting it by *heart too*. And is this then all the Thanks we are *to receive*? Such Ingratitude certainly is even worse than the *Sin of Witchcraft*. In fine, he finishes this Letter, by telling me, 'That I had just as much *French* as 'to become a *Plagiary*, which (says he) was far 'enough for *H. Bracken*.' Yes, truly; I think, it was *full enough* for him indeed, as appears by what has here been *remark'd* of his understanding and *translating of Maitre-Jean*.

As to our Author his Account of the Diseases of the Eyes of *Horses*, which I have now, even as yet, inclin'd to peep into, so to observe on that Head what further he might have *glean'd or stole* from his *Neighbours*, or what Improvements (in that way) he himself might have made. I only then in a few Words remark, 'That tho' the principal part thereof be taken from the Books of *Farriery* of *Gibson, Solleysel, de Grey, &c.* which, together with his own Observations thereon, makes up such a very poor miserable Account, as not in Reality to be in the least worth *our, or the public's* notice: As to his use of *powder'd Glass in the Eye*, which, says he, *may be compared to the Fish-skin used by Joyners in smoothing up their Work*; for *as this smooths and polishes the Wood, so does that the Cornea*; — and with Safety too, as I have often

graphs run on much in the like manner. || He observes indeed *Life is short, and so must write fast*; yes, surely, *this is the quickest way*,

found

found by Experience. I need only in short then say, the Medicine and Comparison is *quite stupid*: To polish a *diseas'd*, a *live Eye*, like a Piece of *Wood*, most *monstrous*! And if he has even seen a particular *Part* to do well, or a *Person* to recover after mad Practice (as frequently happens) what then? As to *L. Calamin* and *Tutty*, they have other Qualities than those of the cutting indissoluble Parts of Glass, the bad Effects of which last in general is easily comprehended. As to his Assertion of *Horses being only subject* to a few of the *Maladies* incident to human *Eyes*, I am well satisfied they are *subject to most* or all of them, squinting excepted (from the Situation of their *Eyes*, &c.) on which Disorder therefore he dwells the longest, and holds forth the most learnedly.



A RECEIPT; or RULES, for the Use of
Dr. BRACKEN, when he comes to Town, his
Friends, or others, who want to be instructed in
the Grand Nostrum of becoming Eminent in Phy-
sick, even though without the Benefit of the Tra-
velling Foundation.

LET the Candidate take special care to join his
Industry and Force with the Interest of some
Practitioner in great Vogue, be it Physician, Apo-
thecary, or Surgeon, by means of such his nearest
female Relation; who, if well provided with a full
Dose of the *Aurum potabile*, to be drank as a proper
Vehicle, our Prescription will thus prove still more
successful, tho' it may do without. After which,
let him choose to keep Company with those of the
Profession, more especially *Apothecaries*. Be also
very well, nor begrudge your Time with *Mid-
wives*,

wives, Nurses, and all other notable good *Doct-
rising Women*, as well as to be often with all sorts
of *ailing Men, Women or Children*. The more
rich, luxurious, intemperate and irregular they
are, so much the better, since they will thus ever
be entertaining you with their *Ailments*, frequently
sending for you, &c. Be sure then to *cultivate* this
kind of Friendship chiefly, and spend much of
your Time with such; *prefer them*, and their
Friendship, to all other Acquaintance or *Friends*
whatsoever. Nor *idly* spend your Time with the
wise and temperate, there being very little or nothing
to be got by 'em; and consequently it is but los-
ing Time the associating with any such, since com-
monly the more *foolish*, the more *irregular*, and
with those therefore the greater Likelihood of *Gain*
this way. Begrudge not then to spend your Time
and Life with them; neither ever *fail* your *Pa-
tients*, nor neglect to order them a sufficient *Va-
riety of Takeables*, more especially since you will
thus be judged of to be the *most knowing*, besides their
being still better contented the more they have for
their Money: so for the same reason *write still*, if
you would touch the Fee, lest they suspect you be-
grudge your *Labour*; for *Words*, being but *Wind*,
(tho' e'er so good) can have no real or *intrinsic*
Value. Be ever in the *Way*, by Night, and by Day,
still within *call*, always on the *watch or catch* for
Business. If not at *home*, or with *Patients*, surely
to be found at the *proper plying places*. Neither
spend any of your Time (out of this Way) in *un-
profitable Diversions*; let it rather be in *caballing*
with those of the *Profession*, and playing all the
Game to each other's *Hands*, according to *Interest*;
consulting principally with *such* who have the
greatest common *Vogue*, and the most *Customers*,
because, in *return*, they are the likeliest to do you
the most *Service* in this way, besides the giving you

a good *Character* to your *Patients*, allowing you to be a Person of some *Knowledge*, in your *Profession* when you *thus use them*. Fail not likewise to make as much *Noise in Town as you possibly can*, so that your *Name* may be sufficiently, and often enough heard of, which is *half and half*, if not *all in all* in this *Metropolis*; it matters but little *for what*; whether for *Success in Practice*, or otherwise. Mankind readily are the *aptest* to make *choice* of him they have the most *frequently heard of*. A *Sufficiency of Show and Assurance* prove also pretty useful; and *Forms* in this way are of far more *Use* than real *Skill*. The attaining likewise to the *good Graces* of some *Personage* in *great Power*, whether *Male* or *Female*, has of late *Years* been of *no small Use*. Let your only *Thought, Pleasure and Satisfaction*; be that of getting *Money*, even tho' the D—l should run away with it at last, or *use it for you* when you are *dead*. Let your *Fingers* be very *gentle* in touching the *Ecclesiastical Coin* in *general*, for reasons best *known to us*. Be always sure to *keep well* with those who *lead your Patients* by the *Nose*. As to your great *Knowledge* or *Improvements* in this *Profession*, that seems not to be so very *material*; or *scarce indeed* of any *Use*; probably, the *less* the better, since the *less* you know, *more blundering on you go*, and *still with more Assurance* too. Thus; the *less effectual* the *Cure* is, the more they ever will be *ailing*, and consequently the *most Money* will be *got*, and so in course the more *eminent* you will be: Besides; that they are the most *honour'd, valu'd, and respected*, who are *always wanted*; for entirely to *watch* and follow *Nature*; and as *soon* and *plainly* to *assist her*, in her own *natural Way*, with what she *requires only* (is quite wrong) there is little or nothing *got that way*; there being neither much *Honour* nor *Profit* to be *gain'd* thereby, (particularly the latter) or by that of *knowingly putting*
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the *Patient* at once into an *easy and effectual* Method of *Cure*, so to recover him *soon* and thoroughly ; being that is but slightly rewarded, and as *soon* also, and as readily too *forgot*. If they are always *wanting you*, they ever *venerate you*, and the longer they have been *ill* of their *Ailments*, the more *overjoyed* at last they will be of their *Recovery*, and the greater *Cure* they will readily *conclude* it to be. Thus *Nature*, whilst yet *sufficiently strong* to overcome a *Fit* of a *Maladie*, even in spite of *blundering* with improper *Physick* (so profitably prolonging a *Maladie*) being nevertheless thus most wonderfully and miraculously *recovered* by kind *Dame Nature*, who still remains *able* and *sufficiently strong*, even to get the better both of *Physick* and *Physician*, the *Cure* is however still *ascribed* to them ; and when *otherwise*, the *Patient*, even at *worst*, does but make his *final Exit*, for he can *die but once*, being then *secured* from becoming a *Patient*, to a *Rival Brother*. Observe then this *Recipe* or *Rules* strictly, and assure yourself it cannot (at present) *miss*, not only of acquiring you *Practice enough*, but even also a most *laudable Degree* of *Eminence*. *Probatum est*.

The getting into *eminent Practitioners Houses* on the *Death* of *such*, or that of making *Interest* for an *Hospital*, seems hardly necessary to be added ; or even that of the writing of *Books* on *Religious Subjects*, *Poetry*, or *Mathematicks*, &c. as being full as useful in *this way*, as the writing of *Physick*, and so may even also (for aught I know) that of the writing of *Farriery* ; neither seems it any way needful I should recommend the great use of the *Charlatanick Art*, so very well known.

N. B. This odd jumble of a *Mixture* (even worse than *Theriac*) never set *easy* or *well* on my *whimsical squeamish Stomach*, the most *plain and simple* means still agreeing the best therewith ; yet to pretend

pretend to acquire the *most Money*, or *Eminence*, by doing Business the *most easily*, would, I doubt, be a pretending to find out the *Philosophers Stone*.

*Reformar in Oggi 'l Mondo;
E una cosa d'en Tifichire
Egli gia è fatto Tondo,
E così, b'a da finire.*

Proverb Ital.

The Reader may possibly pardon my attempting the following Lines, as an *Exception*, to the fore-mentioned *General Rule*, or *Common Proverb*.

*Questo Tempo, si Giocosò,
Non sarà maraviglioso,
Reformare qual che cose,
Co'le ricchezze del Potosè.*





A
SHORT DISCOURSE
ON
DR. PORTERFIELD'S *Motions of the Eye,*
IN THE
Edinburgh Medical Essays.

The Nature of *Cataracts* being here explain'd,
and former Differences in Opinions thereon
are reconciled; together with the Use of
these Parts, &c.

HAVING look'd into the *Medical Essays*
printed at *Edinburgh*, (for which the World
is much obliged and indebted to that *industrious*
and benevolent Society,) I there particularly took
notice of two *Theoretic Discourses* on the *Motions* of
the *Eyes* by Dr. *Porterfield*; and as that contain'd
in them has some sort of Affinity with what we
before have been speaking of, so I have not judg'd
it improper here to take some Notice thereof.
I cannot however at the same time omit observing
that which a learned and ingenious Friend of mine,
Dr. *Adenbruck*, us'd frequently and facetiously to
ask me, to wit, the Reason why those of the *North*
part of this *Island* gave us so very much more *Theory*
than Practice? I am now however glad to see that
the principal Part of these *Essays* relate to *Prac-*
tice. To go on then methodically, or narrowly to

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examine the two forefaid Discourses of the *Motions of the Eyes*, which might, methinks, almost bear the Name of a *Theory of Vision*, being fo very long alfo, that it would, I doubt, make a Volume at leaft as big as a *Church Bible*, did we propofe to dwell on every Part, fince *Observations and Answers*, with *Ratiocinations*, do commonly draw out to a vaftly greater length than the Originals; fo that a long-winded *Theory* (efpecially if wrong) requires too much Time for any one in *practice*, or any who knows well how to imploy his Time otherwife to the beft Advantage. This fame Author Dr. *Porterfield* acquaints us, that he has hardly Time to go on thus fufficiently to compleat his *premised Suggeftions*, becaufe of other *Business*, &c. and thofe confequently in the *like State* will be as much *ftraitned* likewise to confider, or to answer them, if he fhould take that Trouble, and that they prov'd uncertain, &c. But this Author is pleafed to give us a Hint at the End of his *second Difcourfe*, which appears to me, I freely own, not a little *furprifing*, that is, his *Apology* there, for *Defects and Mistakes*, which (fays he) *could not fo eafily be avoided, confidering the Hurry in which it has been written*. This *Speech*, methinks, is by far *too much*, unlefs the Doctor judges that the whole World are *blind*, and can neither *fee*, or by any means *diftinguish* which are the *moft highly laboured Performances*, and which are quite the contrary. Now the moft knowing do all readily agree, that they have hardly feen more *elaborate* and more *finifh'd Pieces* than thefe are, whether *right* or *wrong*, is not fo much the immediate queftion. Had fuch Excufe then come from any very great Practitioner, on obliging the World with his *practical Observations*, there might there have appeared fome reafon for it; but not fo in one who moft carefully applies himfelf to produce a *deep ftudied Theoretic Performance*, not

so highly necessary : or can he yet imagine Man^d kind so very stupid, as that they are not able to see that these Pieces must first and last, have cost him a great deal of *Time* ? since such *finish'd Productions* are not to be perform'd *without it*. He says well indeed, and I do verily believe him, *that he has not time to go on* with such; if he proposes also to go on in *practice*; since I am fully satisfied they must have cost him more time than I here incline to mention. Can he then pretend to alledge, that his strictly and thoroughly examining all manner of *Writers* on this *Subject*, as not only many of the most learned *Practitioners* in this way, whether *antient* or *modern*; but even all the *most accurate Anatomists* of our time on the like *Subject*; whether *human* or *comparative*, (without omitting to consult the Beauties of the System of the ingenious Mr. *Chefelden*) at the same time carefully consulting the most noted *Philosophers*, *Mathematicians*, or *Opticians*, both before; as well as in our *present Time*; of all the best of which, few or none have *escaped him*; no more than the Observations of those of the *Royal Academy at Paris*, or them of the *Royal Society* with us ? Is then the *examining*, *quoting*, and the *digesting* of our Thoughts on all these, the drawing of methodical Conclusions, Demonstrations, mathematical Figures, Corollaries, &c. to be done in any hurry ? or ought it so much as to be *pretended* so to be done by any *reasonable Person* ? Surely few are ignorant of the *Labour* and *Time* such Affairs are done with : Besides that, the World might indeed with a good deal of reason blame a *Society*, who would over-hastily, or in any *hurry* publish the very best, and even the most elaborate *theoretic Dreams*; tho' also accompanied with the Authority borrowed, or even tho' taken from the *greatest Authors*; yet much less would they (or ought they) I say, to publish them with-

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out due *Examination*, believing them to be *any way imperfect*. Is it to be imagin'd that any *Society of Men of Learning and Knowledge*, who take upon them to publish such Accounts to *the World*, will suffer what they any way suspect (or imagine) to be either idle, imperfect, and *incorrect pieces*, so to pass their hands, and thus produce them to the Public with their Names thereto, it being *their own Credit*, that the Productions of every particular Person appear on publishing, as it ought to do. Nay, does not the very *Title-page* of this *Society* bear the like *Insinuation*? acquainting us, that such *Essays and Observations* (are) *revised and published by them*. What then has the World to do with the *Author's pretended hurry in writing them*? Nor would this same so philosophic and *mathematical Gentleman* certainly aver, or endeavour to have us believe, that he writes his elaborate finish'd Papers as fast, or in a *hurry*, as commonly weekly Writers do their *News-Papers*? Neither is this *the case*; nor is there any blame * on the *Society* for having published this: as, no doubt they have with a *great deal of Care*, for which (as said before) the World is oblig'd to them, as well as to *the Author*, for his said *Performance*. But then, I say, there appears to be no room for any such *Apology*, or any just Excuse for the Author (his being in a hurry) if any just Faults should be found therein: And I cannot but at the same time add, that it is surely a very great Advantage for any Author's Works to be publish'd *under the Eye and Care* of such a *learned and knowing Society*. And it being thus in some measure their own, it may, in such sense, partly be look'd upon as their *joint*

* Neither is any such Society in the least chargeable for giving free scope to an Author's Opinion, if any way plausible, as this, indeed, hath the appearance, to those who do not so narrowly examine it, which such a Society is not so properly obliged to.

joint and publick Work; and as such Performance is not to appear until approv'd by them, so every one judges it his interest to correct it, or to add *his Mite* for its further Improvement or *Embellishment*, for *the common Good of the Society*. And so each Member, I say, who has the Care of revising and publishing such Productions, do readily enough contribute their own *Lickings*, and *Trappings*, for their own *Sake and Credit*. But, alas! it is far otherwise, and greatly different with any *private Author*, who has no such *Advantage* of his Works being *revised, corrected, or published*, by any such *Society*, or who has not indeed any one that can properly, or at least who will disinterestedly assist him, as finding, or judging it not to be their Interest, having no Share therein, &c. * In such a case, I say, then, what is there to be said, or rather what Faults indeed are there not to be excused in any such private Author? But, to proceed with our present Author under our Consideration, I shall not, for the Reasons which have already been observed, minutely enter into the Examination of the Parts in general of these so very *long, elaborate and learned Essays*; more especially, since most of what is therein contain'd, seems rather to be matter of *Speculation and Curiosity* (or to produce the Writer's Learning) than any way greatly relating to the *practical part*: Nevertheless, lest some part thereof, I say, or its Knowledge, should some how more particularly and immediately be judged necessary to the *practice*, I shall here content myself a little to consider the *grand Affair*, or seemingly the *principal Discovery*, the *great drift of the whole Performance*; and this appears to me to be that of the *shortening or lengthening of the Axis of Vision, for the greater perfection of Sight*; which

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* *Vide* Letter to the Booksellers on this Subject. of the Difficulty of having an Author's Manuscript well judg'd of.

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(if I mistake not) he principally or solely attributes to the use of the *Ligamentum Ciliare*, which he considers as a *Muscle sufficiently fit and strong* to perform this great Work. I shall now first then remark, that tho' he has been at great pains in examining the most subtle *Anatomists*, or *Observers*, yet that which some one only observes in any such way, (and not thereafter observable by others) *ought not, I say, to be of any very great weight*. Thus, if *Leuwenboeck* could see and discover what no Man else ever could besides him, it is not a sufficient Proof to me (because he asserts it) that it therefore is so. I shall next then observe, that the Generality of Writers on these Subjects (to the great misfortune of Mankind) is, that the one is very learned in the *Mathematicks or Opticks*, yet knows but little of the *Anatomy*, and probably still less of the *practical Part*; so this kind of Writer will be sure to stuff his Performances with a full Sufficiency of the *mathematical Learning*, without being able to give us any thing material in the other Way. Another, whose principal Knowledge lies in the *minutest parts of Anatomy and Philosophy*, will be as sure to supply us with as large a Sufficiency of these; and he who deals only in the *Theory of Physick and Surgery*, without the other Helps, is as fond of pushing his own new-form'd Opinions forward; whilst he who knows nothing but Practice, has not the least regard to *either one or t'other*, despising all, and obstinately running on in his own *blundering way*; and as little capable of instructing of Mankind, or giving the World any tolerable Account of what he does to any purpose. Thus there are extreamly few who have a Sufficiency of each of these, or so much only as is absolutely necessary to form a clear and distinct Notion of the *Maladie*, or what they are about, in this way; and certainly not less necessary

cessary to the more general Knowledge of such Maladies as may have any Affinity therewith : And consequently still more rare to find one sufficiently accomplish'd and knowing, not only in these, but also in fully understanding all the other Maladies incident to human Bodies : without which *due Knowledge and Understanding*, it is I am perfectly persuaded (from the Connection and Change of one Maladie into another) absolutely impossible to understand any one well. I shall not here judge it needful to dwell on the Opinion of this Author, or any other, of that of the *first Mover in us, acting without our proper Will or Knowledge*: Or what Muscles they be (with Origin and Insertion,) which are moved without our Will and Knowledge. Tho' it would not, methinks, have been improper on this Occasion to have determin'd to us, all such which are so acted upon ; as well as some Reason for such Assertion or Conjecture, why we should not know of the Motion of any one such *Muscle or Muscles*, as well as that of others, when we incline it *and attend thereto* *. Now if it should be alledged, that it proceeds from the difference in Structure of one from t'other, it would then at least remain to prove, *that it is so* : Tho' even that, I think, would *hardly be sufficient*. But to proceed to the principal Argument, to wit, that of the *Ligamentum Ciliare* its being a *Muscle*, &c. which serves to bring forward the *Crystalline Humour*, and suffers it again to go backwards ; according as the Objects are *nearer to or further from our Eye*. Upon which I shall first then observe, that I do not by any means pretend to advance, that because Muscles are in general of a *red Colour*, that the *Ligamentum Ciliare* therefore (if a Muscle) *must necessarily also be so*; which Dr. *Porterfield* seems to be at some pains to confute.

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* N. B. I distinguish betwixt muscular Fibres or their Motion, and that of a *proper Muscle*; and even that of the Heart so forced upon by the continual Influx of the Blood.

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But then, at the same time, I would *put him in mind* that all Muscles having such Uses, as he supposes this to have, to wit, the drawing of the Part where the *Insertion* is towards its *Origin*. So, I say, as all Muscles in general have their *Origin* and *Insertion*; so also they have their *Belly* or *Bellies*, being the *thicker Part*; which *Belly* or *thicker Part* contains the *grosser Fluids*, those of the more *subtile Nature*, secreted from the former, being in the *Origin* and *Insertion*, that is, in the two *Extremities*. And from hence, I say, the *Belly* or *thicker Part* will not only appear less transparent, or more colour'd, but being a thicker Body, must likewise become *more visible* *. Now tho' we can very well determine the *Origin* of this *Ligament* or *Muscle*, as he inclines to have it, yet he nor any else, can positively ascertain *where its Insertion is or ends*. Nay, its very *Action*, according to *Kepler* and *Plempins*, is quite different from what he asserts it to be; and its *Origin*, according to them, must be where he would have the *Insertion*, that is, towards the *CrySTALLINE* or *Vitreous*. Thus *Plempius*, says he, *ascribes the Discovery of the Use of this Ligament, in changing the Conformation of our Eyes, to the celebrated Philosopher and Mathematician Johannes Keplerus, of which Anatomists need not be ashamed, it being only from mathematical Principles that the Necessity of any such Change was ever discover'd*. Now what the *Necessity of this Change* is, even tho' thus taken from *mathematical Principles*; or, more properly, the *Use of mathematical Words and Forins*, the more pompously to introduce and prove *their own, dear, fondling, imaginary Notions*; whether, I say, there be any such true *Foundation or Reality*, either in this *Opinion of the celebrated Kepler*, or even that of the *present Author*

* Yet whether all Muscles have or have not so distinguishably a *Belly* or *thicker Part*, is not greatly material to what follows.

Author under our Consideration, is what we shall hereafter more fully examine. The *Author* before us, does, indeed, properly enough observe the Fallacy of such *Ligament* or *Muscle* acting in the form and manner supposed by *Kepler* and *Plempius*; but then it seems as plain and evident, that he borrows his Opinion from them, tho' he gives the same *Muscle* or *Ligament* just the quite contrary Power and Direction. Thus the Doctor seems inclinable to turn the Tables on them, and by way of Opposition to take it the other way.

But now I am a little inclined to observe, that since some of our most accurate mathematical Writers have been so obliging as to present us with their so very valuable Calculations, of the Strength of each Fibre in particular; and so have as learnedly calculated the Power and Force of every such *Muscle* composed of the whole number of its *Fibres*, I cou'd, methinks, wish that this or some such learned Person had taken the trouble of calculating for us, the Power and Force of this *Ciliary Muscle*; since for my own part, I must very freely own, I am of opinion that it is not of any such Strength or Power, so as to be able to perform any such Motions as is asserted, either by the one or the other: Tho' the latter, no doubt, as affirm'd by Dr. *Porterfield*, seems to require the lesser Strength, and seemingly the more rational Supposition of the two; as that by such a Motion it naturally would thus incline more to draw towards its Origin. Yet if we should have the least Regard to the Assertion of the much reputed Professor of Anatomy *Row*, mention'd in my *Ophthalmographia*, of the Circular Sinus round the Edge of this *Ciliary Process*, as he observes in the Eye of a Cod-fish, containing a serous Humour, &c. This, I say, must I think of course absolutely destroy any such Opinion as that of its being a Muscle. But now to advance as yet a little

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tle further, to try our present Author's *new Doctrine*, as well as that of the original, *mathematical, miologistic* Opinion of the *celebrated Kepler*, and that of his Follower, the renown'd *Practitioner, Plempius*, by the Touch-stone of *practical Observation*; we shall find then, that on our bringing it to this Test, all such who have been *couch'd of a Cataract*; and who, according to our present Author *Dr. Porterfield's* Opinion (as mention'd by him in the medical Essays) this of the beating down of the *Crystalline Humour*, now the most general and common received; in this Operation the *Ciliary Ligament or Muscle* must necessarily thus be *all tore to pieces*. Yet *the Sight*, at the same time, seems no way to suffer from any *such Violence*; excepting for the Defect of the want of this *Lens or Crystalline*. The *manner of Vision* still remains in the *same State as before*, which cannot then have any more any *elonging of the Globe*, or lengthening of the *Axis of Vision*, by the Use of the *said Muscle*. Now were it as these Authors do suppose, or affirm, that this *Ciliary Muscle* is so absolutely necessary for *Vision*, those Persons who are couch'd would always have such a very *confused, indistinct, and imperfect Sight*, as that they would *in effect still remain blind*. Nay, they could have no such Use of their Sight (such as it is) as those who have never been couch'd, (from a Deficiency of this Muscle, serving, as is said, for the *Elongement of the Globe*, or that of the *Axis of Vision*.) Whereas, I say, they use their Eyes, have their Sight, and see Objects *as others do*, who have undergone *no such Operation*, baiting the other Defect before observed. And some who have been couch'd do recover their Sight so very well after this Operation, that it is very little, (if any way) inferiour to those who have never had any such *Maladie*. The *Lady Ruffel*, I remember, who had been couch'd by *Monfieur Gerard*, told me,

me, that she had her Sight so very well after her being couch'd, that she could very well *see to read, without the Use of Spectacles*, and continued so to do, even when *much advanced in Years*. Which is, indeed, still a retaining the Sight in a manner, or very near full as well, as those who never were afflicted *with any such Maladie*, and who have a *perfect Sight*. However, I must at the same time as freely own, that I cannot be of Opinion, that in this or some such like Cases, where there is still so very great a Perfection of Sight remaining, which happens so very rarely; that when it does, I do not think that the *Crystalline Humour* is in any such Case *depress'd*, or *any way beat out of its proper Place*. However, this is my private Opinion, (which our present Author, after what he has laid down, is not to use as a sufficient Authority;) I am, nevertheless, at the same time of Opinion, that it is the *Crystalline Humour* which is usually and generally *depress'd or beat down*, in that Operation; of which, together with my own particular Thoughts on that Head, I shall more fully treat of hereafter. And shall, for the present, more immediately consider it, according to his, and the now so common receiv'd Opinion, of the *Crystalline Humour* being depress'd, in all such as undergo this Operation. Now if inquir'd how, and in what manner this *Ligament* or *Ciliary Muscle* must necessarily suffer, so as to be torn to pieces? We have then already observed, that the Insertion of this Muscle according to our Author's best Account thereof, appears to be pretty uncertain, and altogether undetermin'd: However, it seems as plain, that considering it as a Muscle, one part of its superior Side and Insertion, must run to the very Edge of the *Lens* or *Crystalline*; where, forming a kind of *Aponeurosis*, is there seemingly divided into two most delicate Membranes, which necessarily form the
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Capsula or *Tunica Aranea* that thus envelops the *Crystalline Humour*. Now as to the undermost side, and Insertion of this Muscle ; which our present Author the Doctor is principally pleased to take notice of (as best serving his own proper Scheme and Purpose) this part, he seems most inclinable to insert *some-how* and *some-where*, into the hollow of the *vitreous Humour*. Page 197, his Words run thus:—*For the Fibres composing this Ligament or muscular Process do not run in a straight Line from their Origin in the Choroides, to their Insertion in the Edge of the Crystalline, but by their Inflexion form a Hollow beyond which lies the vitreous Humour—and therefore when they contract, this Concavity will become less, and the vitreous Humour will be compress'd; which therefore must, by pressing on the back of the Crystalline, push it forward.*—Supposing this then to be the case, let us a little examine and consider how this Matter will stand, on performing of the fore said Operation ; in which case, I say, the *Crystalline Humour* being depress'd, or beat out of its proper *Capsula, Membrane, or Bag*, the upper Insertion of this Muscle must necessarily be *torn to pieces*; and it is highly probable, at the same time, that the very *Middle, Body, or Belly* of this supposed Muscle is *also tore*; and consequently the Insertion in the *vitreous* must likewise *be lost or suffer*. And this *Process or Muscle*, must still more unavoidably be all *rent to pieces*, if we suppose or allow the glary Humour of this *Maladie* (by Monsieur *Maitre-Jean*, call'd the *Accompagnement*) to extend itself all along the *Ciliary Process*, even to its Origin, as it often happens ; being sometimes so *indurated* as to become almost as *hard as Horn*, so as oftentimes to make the *Needle* (in the Operation) *bend again* : And on some Occasions, so as hardly, if at all *to be forced down*. On such Extension then, I say, tho' not so very highly indurated, yet this

this *muscular Process*, must in course on all such Occasions be *lacerated, and quite destroy'd*. Nay, even in the most common Case, where we allow a forcing or beating of the *CrySTALLINE* down out of its place, and *so tearing* of its proper *Tunic* or *Membrane Aranea*, it must probably, at the same time, likewise often tear that part of the Insertion into the *Vitreous*, which our Author mentions; and lays so great stress on. Now, besides all that is here said on this Occasion, it may, I think, easily enough be perceived, that could we (or our Author) even imagine any part of this muscular Process so as yet to remain without damage, after such Operation; yet, even then, according to his own *Doctrine*, this Muscle behoved absolutely to become useless; because this Cavity of the *Vitreous being now become convex* (as he allows) the great and utmost Use, to wit, the Contraction of this Muscle, must be to no purpose. And now, although what has been here advanced seems to me sufficient to destroy our foresaid Author's Opinions, whether this of the present, or of those before him, who maintain this *Ciliary Process* to be a * *Muscle*: Yet as it may possibly be some further Satisfaction to my Reader, or our present Author, to say somewhat more on this Subject, particularly as to my own private Thought and Opinion of these Matters; I shall accordingly proceed as yet a little further on that Head. And tho' all I advance may not properly be said to be positive and certain *Demonstration*; nevertheless, I endeavour to advance no further than what *Observation*, in the Practice of *Maladies, Anatomy*, or what the Nature of the Thing appears to

* In fine, being allow'd either to be a *Muscle* or a *Ligament*: If a *Muscle*, it cannot well do the Office of a *Ligament* on its Relaxation, to wit, that of keeping the *CrySTALLINE* in its proper Place with the Firmness of a *Ligament*. And on supposing it a *Ligament*, if on such Motions of that Humour, this *Ligament* must readily be tore to pieces.

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to me only to admit of. In order thereto then, I shall first remark, that *Coronet* or first part, and Origin of the *Ciliary Circle* or Process, the *Sclerotica*, with the *Choroïdes* and *Retina*, do there all meet and join together; it being here that *the Fibres* of their Membranes or Coats, seem anew to be reform'd, intermix'd, or a-fresh to be *rewoven* and *remodell'd* with one another, so as to *create* or make a quite different, or altogether new Form of *Tunics*, *Membranes*, &c. And thus, and from hence then it is, that the *Cornea* arises; that the *Iris* is also form'd or takes its Origin, with its inner Part of *Uvea*, the *Ligamentum Ciliare*, &c. Which last, I say, plainly takes its Origin from this said *circular Coronet*; and as the *Choroides* appears to be a *Tunic*, somewhat of the nature of a common *Strainer*, principally composed of *Glands* and *Canals*, so as to separate the *grosser* and *purer* Parts of the Blood from each other; so these purer *Limpid*, *Aqueous*, and more *transparent Parts* are without all peradventure, *strain'd off*; at this *Coronet*; part of which seems there, by the proper Openings or the *Mouths* of such *Aqueous Duets* (pretended to be seen by some) thrown into that common Space (between the *Cornea* and *Crystalline*) ordain'd for the Reception of the *Aqueous Humour*, whilst some of the remaining part of this *transparent Liquid* is, at the same time, carried on or brought forward from the foresaid *Coronet*, in the most delicate *pellucid Tubes* or *Canals*, which altogether form (together with the Vessels fit for the Structure or Nourishment of the membranous Part) that of the *Ciliary Ligament* or *Process*, now so generally understood under that Name. This said Humour then being thus carried on in these *Ciliary Aqueducts* (as I shall take the Liberty of terming them) are possibly, if we any way credit the Affirmation of that most accurate *Anatomist the Professor Row or Ravius*,
first

first thrown in or emptied into the *circular Sinus* running round the *Edge* of this *Ligament* or *Process* first spoken of or *discover'd* by him: Yet whether just thus or otherwise, it must it seems at last, according to all Probability, be emptied, and thrown into that *Capsula* or *Bag*, which contains the *Crystalline Humour*, that is, on or into the *Crystalline*, and betwixt it and the *Tunica Aranea*. And thus this membranous Part of that *Ciliary Process*, is either divided into *two Membranes*, for the Formation of the said *Capsula* or *Tunica Aranea*; or otherwise, if we are more willing to suppose it only to make up one Membrane, it must then be imagin'd to pass over its outside (so to cover it) and then to *return*, by passing under it; and in like manner to *envelop* and make a *Coat also* for the *vitreous Humour*. But if we suppose it as before hinted, to wit, the being divided into *two Membranes*, we must then conclude, that the *lower Part* or Side of the said *Ciliary Process*, probably also much of the *same Form* and *Nature*, containing likewise its own proper *Canals* or *Aqueducts*, is in like manner to be divided into *two* or more Membranes; which *two* serve to form the *vitreous Tunic*, and seem to be furthermore subdivided into an infinite number of *Vesiculæ* or *Cellulæ*, all of which are *replenished* or *filled* with the like *Aqueous Humour* (probably from those Ducts) which all together makes up that whole Mass or Body, we term by the Name of the *vitreous Humour*. This then seems to me, to be the *Nature* and *Texture* of this *Ciliary Process*, as well as in great measure, its *common Use*, and that of its serving likewise as a *Ligament*, for the retaining of the *Crystalline Humour* in its proper *Place*, opposite to the *Pupil*. This then, I say, of the carrying on and the subsisting of these *two Humours*, with the proper *Liquid* for their *Nourishment* and due *Subsistence*, appears in reality, according

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cording to the best of my Capacity; to be the true *Nature* and *Structure* of these so very delicate Parts; too *nice and minute* for the Eye to be able to discover as we would wish, yet this is all my utmost Searches therein can discover, or that my Reason can impart. Now if this then proves to be the true State of the Case, it will plainly and evidently appear also, of what great Use these *mathematical Principles* have been, which are spoken of by our Author, in relation to the *Necessity of any such changing* (by the Use of this *Ligament*) the *Conformation of our Eyes*, the Discovery of *Kepler*, &c. But after what I have here advanced on this Subject; it will, I doubt not, be more fully satisfactory to my Reader, that I should as yet add somewhat further on the Nature and Origin of *Cataracts*, not hitherto so fully made clear to the World, being as yet still contested, &c. I shall then endeavour to reconcile all these Disputes, and thus strive to render the whole sufficiently clear, and I hope even so as to leave no proper room for any further Dispute. The *Aqueous Liquid* then, which we have before been speaking of, whether in the two fore said *transparent Humours*, or that in its proper and common *Receptacle* or *Aqueous Space* behind the *Cornea*, however *pure and transparent* such Liquor is; yet nevertheless is, without doubt, *secern'd* from the Blood (as the other Fluids are;) being, without question, the *thinnest and purest Part* of the *Serum*; still in some measure retaining somewhat of that certain *Viscosity* so common to *Serum*, and not to be found in *common Water*. Thus then when the Blood is become *vitiated*, particularly being loaded with a *Rheumatic Humour*; that is, when the *Serous Part of the Blood* is become *fizy*, and that such Humour tends greatly *upwards*, or is much thrown up to the *Head* (often producing there, *violent, shooting Pains*, &c.) then it is, indeed, that the
Eyes

Eyes come to be *threaten'd*, and at the same time also to be in great *danger*, particularly when much tending towards the *Forehead*, and still more especially, when directly towards the *Eyes*. Thus then it is that the Blood in general, being more or less *sizy*, so this *Aqueous Humour* secreted therefrom, will readily be more or less liable to partake of the same; or to have somewhat more or less of this *gluey Humour* secreted therewith. And still yet more particularly and readily, as the said *sizy Humour* is more naturally and *specialy* carried to these *Parts*. And from hence then it will follow, that these so very *subtile*, fine, and most *delicate Particles* and *Filaments*, will thus *arise*, be *form'd*, and *appear*; tho' so extreemly imperceptible at first; which shews it self *in length of time*, in the Resemblance of *Smoke*, *Clouds*, *Dust*, *Cobwebs*, *Hairs*, *Threads*, *Flies*, &c. which (in such case) no doubt, are in the *Aqueous Humour* and not in the *Retina*, as has been observ'd in my *Theory of Vision*. Such small *Filaments* then, coming from, or passing through the *Mouths* of those *Vessels*, the foresaid *Openings* at the *Coronet* before mention'd; which serve to discharge or empty the *Aqueous Humour* into its *common Place* and *Receptacle* behind the *Cornea*: These said *Particles* or *Filaments* seem to be carried, probably, from all sides of this *Coronet*, and so *creeping along* the *out-side* of the *Ligamentum Ciliare*, and over the very *Body* and *Out-side* of the *CrySTALLINE Humour*, so as all to *meet*, and in effect thus to *form* or *spin* a most *delicate* kind of *Cobweb* (of this *sizy Humour*) over the whole *CrySTALLINE*, or its *Tunica Aranea*, &c. and thus with time *growing up and hardening*, at last becomes, what we call, a *Cataract*. And 'tis this sort which may most properly be term'd that of the *membranous Kind*. And this is more particularly and *fully proved* from *Observation in Practice*; which is, that

on the Operator's laying his *Needle only* thereon, that is touching it in the very *slightest Manner imaginable therewith*, before it is come to be *ripe and indurated by time*, it immediately thereupon *disperses*, and at the same time turns the whole *Aqueous Humour turbid*, (as is observ'd in my former Treatise.) Which is, however, in some time thereafter, that is to say, in some few Weeks it *settles to the bottom*, or lower part of the *Aqueous Humour*, whilst the *CrySTALLINE*, at the same time, *becomes clear*, and the *Sight is recover'd*, possibly not less than had it been *couch'd when fully ripe*, or sufficiently indurated; and, in all likelihood, is less liable to *rise again*, as sometimes happens after having been *couch'd*. Those of this kind are, I doubt, not the most *successful sort*, and where the greatest Perfection of Sight follows on *couching*. And it is not improbable, that it might have been of this kind, that the Lady *Russel's* was; yet I am heartily sorry to say, that I am well persuaded *from Experience* that such happens but very rarely.

It is sufficiently known to the Curious, that the Affair of the Opinion of *Cataracts*, whether it be in reality the *CrySTALLINE Humour* it self that becomes *viciated*, or this of a *Pellicula* or *membranous Substance*, has been the grand Dispute for *some Years*. In a word, it has been proved with good Authority, (by each side) on Dissection, to be the one way, as well as the other. Tho' the former, the Opinion of Monsieur *Brisceau* and *Maitre-Jean*, has, no doubt, more fully been so proved, because (as observed) it is the most frequent and more common kind, and consequently more Instances to be had in that way. From this then, which has been hinted, it may readily be perceived, that they will thus become liable to be divided, into the *more kindly* or *slighter sort* of *Cataracts*, and those of the more common
and

and less successful, as well as those of the more malignant and most unsuccessful kind. Now; as to the manner how the other sort is form'd, it likewise appears as plain to me, that whilst as yet there is but a small quantity of this Size in the Blood, so possibly the larger Particles or sily Flakes, are thus more easily floating along in the larger Canals or Ducts; where they meet with the least Resistance: But the Blood being still more abounding with this glary Humour, both of the lesser as well as of the larger kind of such Particles; some of the more Minute, will, and do, in all likelihood, pass thorough those Ciliary Ducts, (we have before spoken of) and are so accordingly thrown into the Tunica Aranea, all over the Crystalline Humour; which is thus rendered opaque. As this then but seldom or ever happens, without the other sort on the outward or fore side of the Tunica Aranea in the Aqueous Humour, in the manner and from such Reasons we have just been speaking of; so this sily Pellicle or Cataract, in the Aqueous Humour or Outside, lying commonly, I say, on the Aranea, is by Monsieur Maitre-Jean supposed to be, or called by him, the Accompaniment of the Cataract. From all which then that has here been laid down, it will in like manner follow, that when the Blood is universally loaded with this Rheumatic Size, or at least, that flowing to the Head, and in particular towards the Eyes; it will then, I say, readily happen; that even the smallest Ducts * and minute Parts will in this manner likewise be overcharg'd, and consequently thus filled with this unkindly Humour; and so not only the Crystalline; but even the vitreous Humour

* As those of the Vitreous are, probably, the most minute Ducts, so probably that Part may be the last which suffers, the Particles spoken of being first carried thorough the larger Canals; or otherwise from the more general Taint of the whole Mass.

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also, in all its *Cellulæ* will be clogged and filled therewith ; and by this means will become opake. In a word, it will thus become *universal* over all the *internal Part* of the *Globe* ; a *Maladie*, for which there is *no cure*. Now, by all that I am capable of comprehending of these Matters, this kind is generally attended with great and * *shooting Pains of the Head*, if not also in the *Forehead*, and towards the *Eye in particular*. The second sort is sometimes, likewise, accompanied with *more or less Pain* ; whereas the *first* and *most laudable kind* very rarely or ever are.

From hence then, it will be sufficiently observable, how very necessary : is, well to understand the *human Structure*, and that of the *Animal Economy*, as well as the *Maladies in general*, incident to *human Bodies* ; which, at the same time, plainly proves, I think, that it is not a sufficient Qualification for one who has dabbled a little in *Eyes only*, with *Eye-Salves*, and *Eye-Waters* ; or even daring (though successful too) to thrust in a *Needle*, &c. to pretend or presume therefore to understand, and so to undertake the nice and difficult Task of remedying all the *Maladies* incident to this *so noble* and *most curious Organ*.

I might, 'tis true, proceed to shew, that this *fizy or rheumatick Humour*, is that which is, or forms, both *Gout* and *Gravel*, as well as the *Stone* ; when falling on all the Parts common to those *Maladies*. So I might likewise more fully observe (were it not time to finish) that the *Crystalline Hu-*

* N. B. After having writ this, I looked into Monsieur *Maitre Jean*, where I observ'd, page 133, he speaks of *une Humeur Rhumatifante* ; but he distinguishes this from, *cette Serosité acide amassée autour du Crystallin, & qui cause la Cataracte*. However, what this noted Author is pleased to observe there, on this Head, gives me no Satisfaction ; but rather serves more fully to prove, or to convince me, in what I have here advanced.

now,

mour, I say, has even also been found to be *petrified* in its *Capsula*, as *the Stone* has been found, in the *Bladder* and *Kidneys*, as well as in the *Lungs* and *Gall-Bladder*, or as *chalky Stones* have been found in *gouty Hands, Legs, and Feet*. So that in effect, it is still the same *Thief*, only appearing or *breaking forth* out of the *Fabrick* (or towards the extremities) from the different *Parts thereof*. How very necessary then such universal Knowledge must be, will easily and readily *appear*; and so (if I may be allow'd the Metaphor) to know, have, and properly to understand the true and *just Use* of *the Lord Chief Justice his Warrant*, for the duly *following, fettering, or subduing* such, in any Part of *this Animal Kingdom*; that is, the *preventing* and *hindering* this common *Enemy* from *seizing, or destroying* the *noble or principal Parts* of our *Constitution*, is what I must leave to the further and more mature Consideration of my thoughtful Reader.





SOME REMARKS
ON THE
Maladies and Operations of the Eye, &c.
IN
Mr. *Chefelden's* Observations,
(In his *Anatomy*)

On the *Diseases and Operations* of that
ORGAN. And of some other Prac-
titioners, their Practice and Improve-
ments in *Hospitals, &c.*

I Know not whether (in a great measure) I may not have been consider'd as *one dead or a-sleep*, these many Years by-past ; whether from *an Indolence*, or some particular Inclination of innocently amusing my self, or that of being otherwise *well employ'd*, seems not much material *to the Publick*. However, I cannot but own that I think it is possible to arrive at such Knowledge in *this way* ; nay, even *Physick in general*, as the nature of *that Study*, and the *human Capacity* will admit of ; proportionably to that of other *Arts and Sciences*, tho' in itself not altogether *so certain*. To which pitch any Person having attained, being a Man of Spirit, and having a general Desire or Thirst after Knowledge, (as most such have ;) he then, as *Conquerors* thirst after *new Conquests*, so likewise does he *in fresh Desires of Knowledge* ; which is *boundless*, and still more desirable the more pleasant and amusing it is. I know not, I say, whether, during this my *Qui-*
etude,

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etude, some *nocturnal* or other *Birds* may have made a little over-free with some of *my Feathers*, to deck themselves with. However, I must now own, that on hearing the *melodious Songs* of a celebrated *Nightingale*, in the praise of his *Eye Curer*: Tho', I own, I understood him with the Knowledge proper to him, that is, with the *Licentia Poetica* Allowance: Yet the *enchanting, warbling Notes* of this *melodious* * *Bird*, I say, *roused me more* than all the *Noise and Bustle* of those of the College of ———, or those of the *S——ball*, in running after our clamorous, vain, pretending *Occulist T——r*. I must, nevertheless, at the same time say, that to judge right, and truly well, such who pretend to make a proper Judgment of a Person's Knowledge in any particular Way, they ought to be more learn-

* As some have been bold enough to assert, that the best Poets have been blind, as witness *Homer, Milton, &c.* which, say they, is proved by the Improvement of our Reason, when we are not diverted by outward Objects; that is, the internal Sense becomes *better* by the loss of the *External*, as not being so much diverted by the continual Use, and viewing of *external Objects*. Of which, if I mistake not, *Milton* somewhere makes some such Hint. Now, as our *ingenious Author* Mr. *Chesebden*, I well remember, used to be greatly given to *Poetry*, methinks it would be worthy his Enquiry (for the Benefit of the Curious) to know, or find out, what sort of *Blindness* it might be that *Homer* in particular was afflicted with; because, if it was that of the *Cataract Kind*, (especially of the proper sort) he then, as our Author observes, being able to *distinguish Colours*, could not so well be said to be *blind*; which you know would plainly prove that the *best Poets were not blind, &c.* But if, notwithstanding, that it had been *this Maladie*, they, nevertheless, have taken the Liberty to call him (tho' improperly) *blind*. Yet it would, I say, even in that Case, contradict the common *Proverb*, and prove that *blind Men, or Poets, can, nevertheless, judge of Colours*. Now, whether these things be sufficiently clear'd up by the particular Epithet given to such Heroes or Poet, that I know not. But if *Homer's* Case can be supposed as hinted, what pity it was, he had not a sufficiently approved Hand, so celebrated by him (or some noted *Poet of those Times*) accordingly to have couch'd him; even tho' the *Oculist* had been less celebrated.

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ed in that Way than those they pretend to judge of, or at least very near as much; otherwise they will not only be very liable to the being *deceiv'd themselves*, but by such means also most ready to *impose on others*. Being now then a little *roused*, by such *melodious Sonnets*, and the foregoing Letters, &c. I begun to *shake my Ears*, and to look somewhat a-round me, so to observe what Advances might have been made in this Way *in this great Town*, ever since my writing the foresaid *small Treatise of the Eye*. I found, that *my very ingenious Friend Mr. William Cheselden*, appear'd amongst the first of that number; of whose Writing, *in this Way*, I freely own I had not the *least Knowledge or Suspicion*, until just now, on Examination of the *last Edition* of his Anatomy, that I *undeceiv'd my self*: his System or Observations of the *Affairs of the Eyes* being *therein contained*. I shall then only say, that in this last or *fourth Edition*, I observed large Strides towards Improvements *in this Way*, which were *not in the first*, or seemingly therein to have had any Thoughts *in this Way*; which, therefore, may also occasion the few following *Queries on this Subject*. Which I now even the rather choose to mention, being I understand he is upon publishing *another Edition* with *great Additions*; so that I choose thus to give him a fair Opportunity of answering these *my Queries and Remarks* in his *said new Book*; or to correct such Thoughts contain'd in his *former Editions*, as he shall judge most proper, since I am no way *on the catch*, or *to criticise for criticising sake*, but merely for the *sake of Truth*, and the further Satisfaction of the *World in general*; in which Light I hope he will *consider it*, and no otherwise, since *Amicus Plato*, &c. Nor ought we from Vanity, or any *other views to differ*, but readily to agree to the *promoting of Truth*: More especially, since I
would

would not only consider him as *an old Acquaintance*, but also as a *Man of Merit*. My Intention, as I have said, is not *criticising for criticising sake*; since I have always been of Opinion, that the best, *most laudable*, and most effectual way of *playing the Critic* on any Performance or Book, was to write a better of our own. Now, as I have already writ a *Treatise on the Subject of the Eye*, it may, I think, freely enough be allowed me to take some Cognizance of such as any way *treat of the like Subject*, tho' they treat not thereof in any distinct, or *particular Treatise only*, but accompanied with other Subjects. I shall not, however, pretend, or judge it any other way necessary, to make Observations on his General, Anatomic Work, tho' the other be certain'd therein; especially, since I never have publish'd any such General Work, whate'er I might once, or ever have intended. Yet I shall now, I believe, hardly think of any such Thing. Nor shall I even now trouble my self, particularly, to criticise on all the Parts of the Eye, mention'd or *omitted*; or of such Deficiencies, Faults, or *Neglects* on this Subject, contain'd in this said *Author's Anatomy*; but shall only observe this *in general*, That it appears very strange to me, that he should have given us no distinct *Prints of the Parts*, either of the *Eye* or *Ear*, but only *indistinct* and *very imperfect, short Accounts* of such Parts as he is pleas'd to mention. Nay, his *last Edition* does rather, indeed, seem to be a kind of *Theory of Vision*, in his way, than properly the *Dissection and Anatomy of the Eye*, which the World so reasonably expected him to have produced. Altho' his launching out so far into the *Theory of Vision* (possibly even also with the Advice and Assistance of his Friends) yet I cannot by any means imagine, no more than some of his best Friends, who seem ready enough to allow, that this Part is not his *greatest or best Talent*.

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Talent. It were then to have been wish'd, that he had dwelt a little more on such Part, as he has been judg'd to be more knowing in, to wit, the *dissecting* or *operative Part*, so commonly allow'd to be his *principal Talent*. But if he, nevertheless, do judge himself to be sufficiently capable of, or even the *more able*, in the *former*, what shall we then say? if not, that it is but too common a thing for Mankind, to endeavour to shew, that they shine the most, in that which in reality they often are found and appear to be the most *weak* in. I must, as yet, likewise further observe, that besides the former Reasons which induced me to the present Undertaking, is, that on Examination I observ'd, That I am so far from being expressly spoken of, or named, or that of my Treatise, in those his Accounts of *the Eye* (tho' of so long Acquaintance, or long publish'd, &c.) that he seems rather carefully to have * *avoided the same*; yet the *drift* in *several Parts*, if not *in the whole*, seems plainly enough to *squint towards me*, as I shall more particularly endeavour to make appear hereafter. And this Method of taking notice of a Person, or his Works, who, at the same time, plainly appears to be in our *Eye*, is far from being the best, probably *the most ungenerous and unfriendly way of treating him*. Now should he, at the same time, in the least, be any way found *guilty of filching* of any thing from any *such Person's Performance*, might we not then judge him to be still *more blamable*? I shall then only touch on some few *such Points* as seem somewhat *a-propo*, or relative to the Subjects, before treated of in *our foregoing Letters*. Should then this our Friend, incline to take Parts from us, hitherto *allow'd*, instead of discovering of *new ones*;

* This probably, according to the common, fashionable, approved Method, may not improperly be call'd, sinking of an Author, when we incline he should not be much heard of.

and

and again to allow them in *latter Editions*, without the *least Apology for so doing*, what must we think? But to begin, and to explain this more particularly, I shall then observe, That most Authors now agree, as well as that in my Treatise, page 18, there is there made mention of the *Tunica Aranea*, (which envelopes the CrySTALLINE Humour) viz. *The Tunica, with which it is cover'd* (speaking of the CrySTALLINE) *is called the Aranea; because of such a very delicate Texture: This Membrane adheres to, or is continued from the vitreous Tunic, and Ligamentum Ciliare.* Very well, so far is asserted by me: Now let us hear the Observation of our said Friend Mr. *Chefelden* on this Head, in his *first Edition*, publish'd soon after mine: where he goes on, page 176, in the following manner. "Some Authors have reckon'd a Coat to the CrySTALLINE Humour, which they call *Aranea*, from the Delicateness of its Texture. But this Appearance results merely from the *boyling* or exposing the Humour to the *Air*: Which is their way of discovering it." Very good; this, surely, is a *very home Thrust at me*, and all such as mention this *Coat* or *Tunic*. I took it, indeed, to be *particularly levelled at me*, on the first Publication thereof, (being soon after mine was publish'd;) upon which I call'd on Mr. *Chefelden* at his House in *Cheapside*, to talk the Matter over with him, to know what he meant by it; in fine, to satisfy him on that Subject. I shall only say then, that he made *no great Reply thereto*; but that he *colour'd*; which then, indeed, shew'd his *Modesty* on that head: On which I left him, without imagining it necessary to push it any further.

The next and *latter Editions* (which, as I've said, I did not mind or look into till now) goes on as follows. Third Edition, page 325, as also the fourth, tho' a different page.—"The Crystal-
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“line its Shape is a *depress'd Spheroid*; it is *distinctly contain'd* in a very fine Membrane, call'd *Aranca*.” Excellently good again; “*distinctly contain'd* in a very fine Membrane, call'd *Ara-neae*.” But how then are we to reconcile this with the foregoing *positive Assertion in the first Edition*? Some Authors have reckon'd a Coat, &c. What is this then, our ingenious Friend his way of *discovering it*? without making the least *Apology to the World* for so *positively and bluntly contradicting* what he had as *positively asserted* before. And why not tell us how he came to make this *new Discovery*? If he inclines not to discover to the World, that he owed to me any *such Obligation*, yet, surely, he might have form'd some *pretty Story*, as to his way of *discovering it*. But, indeed, he is very short in his *Description thereof*; so that he would seem to have concluded on that Head, *that fewest Words are best*. As to the *CrySTALLINE* being in shape a *depress'd Spheroid*, he had better to have acquainted the World, as mention'd in my Book, that its form is *as that of two Segments of Spheres of different Magnitudes*, being join'd together, the most *Convex* of which, lies *backwards* in the *vitreous Humour*.

The next thing then, which I shall observe, and which seems plainly to have been borrow'd from me, or at least, that which first gave him such Hint (without, at the same time, taking the least notice of me) is, that as there was nothing mention'd of any *Theory of Vision*; or of any Print or Figure of that kind (for the better Explanation thereof) in his *first Edition*; why, truly, he very fairly puts into his *latter Edition* the *same Figure on Vision* as is contain'd in mine. 'Tis true, indeed, he might have found much the like Figures in Books of *Opticks*; tho' it seems full as likely, that he took the first Hint from my Use thereof. It is, however,

ver, certain, and I doubt not he will readily enough alledge, That tho' the same Figure in effect, yet that he has made some Additions thereto, as that of an *Optick Nerve added*, as well as that of the *Beam of Light*, or *the Rays of an Object* being lost, which fall on the Entrance of *that Nerve* into the *Globe* to form the *Retina*. I will as freely allow that he has even done all this, which I judge no way necessary. Let us now then, a little consider the *Uses our improving Author* makes of this, as well as our own *Observations* thereon. I do not, in the first place, allow the *Optick Nerve* to be so obliquely placed in *Human Subjects*, or quite so distant from the *Axis*, or middle of the bottom of *the Globe*, as he puts it. Now, as to his particular *Opinions, Ratiocinations, and Observations*, in relation to this *Nerve*, I shall first choose to repeat his own Words, before I go further. Third Edition, page 328, speaking of the *Rays of Light* being lost, or their being insensible to us, which come from any *Object*, and are placed or *terminate* on the *Entrance* of the *Optick Nerve*, where it comes to *form the Retina*.——“ Which, “ (*says he*) appears from part of an *Object* being “ lost to one *Eye*, when we are looking towards “ it with the other shut. I know (*continues he*) a “ Gentleman, who having lost one *Eye* by the “ Small-pox, and going through a *Hedge*, a “ Thorn, unseen (probably from this Cause) struck “ the other, and put it out. The two *Optick* “ Nerves, soon after they arise out of the *Brain*, “ join and seem perfectly united : Yet, from the “ following Case, I am not without Suspicion of “ their *Fibres* being preserv'd distinct, and that the “ Nerve of each *Eye* arises wholly from the opposite “ side of the *Brain* ; or else, that the other Nerves “ throughout the *Body* arise from the *Brain*, and “ *Medulla Oblongata*, on the sides opposite to “ those

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“ those they come out of.” Which Assertion, or Supposition he pretends to prove, in the same place, from a Soldier, who by a Push or Violence on the left Eye, which raised it out of its Orbit, “ was (*says he*) presently follow'd with excessive Pain in the right side of the Head only; and a loss of the Sense of Feeling, and Motion in both the right Limbs: Which, some time thereafter (*says he*) recovered.”

First then, as to the Rays of Light coming from the Object, and their falling on the *Entrance* of the *Optick Nerve*, where it forms the *Retina*, which are there lost by being placed on the *Diameter* or the whole breadth of the *Optick Nerve*: Methinks, it would not be improper to enquire of *our Author*, whether even that very Breadth or Entrance there of the said Nerve, be not also *Retina*? (and, probably, also the most delicate Part thereof.) Now, since he, in these *latter Editions* appears to affect much this kind of Writing, with his singular Ratiocinations thereon, &c. it would have been, I imagine, or is still greatly *a-propos*, as an *accurate Anatomist and Philosopher*, to inform us, why this said Part of the *Retina*, being the whole End and Thickness of that Nerve; which is not an inconsiderable Part of the *Retina* where the Rays of Objects are placed; why such Rays then, or *their Impulses*, should prove less, or no way, sensible to us there, as they do on the other Parts of the *Retina*? I have, indeed, heard some pretend to give a Reason, tho' nothing satisfactory. *Monf. Marriot*, or others, their Experiments to prove such Rays being there lost, is no Answer to this Question. Nor can I say, but that I still retain some Suspicions of that now so common receiv'd Opinion, tho' *Monf. Marriot's Experiment* is certainly very curious; yet, whether it may not even possibly proceed from *another Cause*, is what I cannot here pre-

pretend to determine. And as it seems more properly to come under the Consideration of the *Opticians*, or the Improvers and Followers of that Doctrine and Opinion, so I shall at present leave it.

Let us now then come to the Proof of this Opinion, from the Observation made by our *considerate Author*, of the Gentleman who had his *Eye struck or put out* (or, rather Sight) *by the Thorn unseen, probably from this Cause*. I must freely own, I am here at a great loss to understand my penetrating Friend in this Particular; or as to his method of Reasoning, and in what manner it is he proves it by his *mathematical Figure of the Theory of Vision*; or by any other way. *For Example*; can our *worthy and very curious Friend* pretend to place a *Thorn* in any Position, *so before the Sight of the Eye*, as that the Person shall not be able to *see*, or any way to *discern the said Thorn*? if the said Person makes the least Attention thereto: If not, what does he talk of?

As to this Gentleman, his so unluckily having *this Thorn* thus suddenly to *strike his Eye*, that he had not time to shun it, from the exceeding Swiftneſs thereof; so that he might, in this manner, loose his Sight thereby, is, no doubt, very possible. But as to the Reason given, or the far-fetch'd, learned Supposition and Remark our noted Author is pleased to make thereof; it is, surely, without the least Foundation, either from common Sense or Experience. Now, as to our *celebrated Author*, his Observation of the *Optick Nerve of each Eye, arising wholly from the opposite side of the Brain*; I cannot allow that neither, or the least approve of that Opinion; notwithstanding, all the great Reputation he has acquir'd in this way of dissecting, &c. And I would oppose to his Authority the Observation of *Vesalius* his *Woman*,

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man, who had her right Eye *emaciated*, together with the *Optick Nerve* on the same side ; whose Authority, if we have any regard to, plainly proves, that the *said Nerves* do not cross each other, so to be communicated into the opposite, or *contrary Eye* : Or that their Fibres are any way *mixed or confounded* with each other (but tho' gently touching each other) their Fibres do, nevertheless, keep entirely *distinct and separate*, and the whole Nerve is inserted in each Eye from its own proper side.

As to the Proofs brought by our said Author, Mr. *Cheselden*, of this Soldier, who, by a violent Push on his Eye, which was presently follow'd with excessive Pain on the contrary side of the Head ; this appears to me very easy to be accounted for, in quite the contrary way to what our said Friend advances. As for Example ; what can shew it self more plain, than that the left Eye by the Violence of the blow, became thus greatly inflamed, and thereby was so accordingly *raised or heaved up out of its Orbit* ; by which Violence the *Dura* and *Pia Mater*, that cover the *Optick Nerve*, behoved also thus to suffer, and readily so, likewise, to be thus *over stretched and inflamed*. Nor can it seem any way strange, that those Membranes on the *contrary* side of the Head (to wit, the right) should more particularly suffer on this Occasion ; and thus to be *highly inflam'd, violent Pain, &c.* more especially, when we duly consider the oblique Insertion of the *Optick Nerve into the Eye*, and, consequently, upon the *violent Inflammation, strong Tension, and pushing forward of the whole Globe*, must necessarily, from its Position (or that of the *Optick Nerve*) more particularly strain and inflame these very Parts of the Membranes of the *Dura* and *Pia Mater*, on the opposite side. And, that the right Limbs of this Patient might likewise suffer from
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the same Cause, to wit, that of *loss of the Sense of Feeling and Motion*, need not, neither, seem any way strange; when consider'd, that *the Coats of these Nerves* being also affected by the *Inflammation* of the fore said *Membranes*, on that *Side or Part* from which they receive their *Coverings* or have a *Communication*.

But now, let us take a little Notice of our present Author, in his describing of the *Aqueous Humour of the Eye*; or rather his accurate Account of *the proper Uses thereof*. Third Edition, page 324, he informs us in the following Manner. "The *Aqueous Humour* lies foremost, and seems chiefly of use to prevent the *CrySTALLINE* from being easily bruised by rubbing, or a Blow; and, perhaps, it serves for the *CrySTALLINE Humour* to move forward in, while we view *near Objects*; and backward, for *remoter Objects*."—— And what, is this then the only Account and Uses of this Humour, which our *accurate Anatomist* can give us; or that he judges necessary to oblige the Publick with? In my Opinion, he had far better have said nothing on that Subject; because it instructs not, unless to lead the unwary out of the *right way*. How, I pray, does it prevent the *CrySTALLINE* from being *easily bruised by rubbing, or a Blow*, any more than were the same *Cavity or Chamber* fully extended *with Air*? And, consequently, if so, no need of the *Aqueous Humour* in that Case: And as to his, perhaps, of the *Aqueous Humour* serving for the *CrySTALLINE Humour* to move forward in——that, I say, (even supposing such Movement to be fact) were this *Aqueous Space*, as we said before, only *fill'd with Air*, such Motion would be full as well perform'd: And, consequently, if so as observ'd, there could then be no manner of Use or Occasion, for the *Aqueous Humour*, as express'd by our said Author. But, on the other hand, I should be glad to know,

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why we may not suppose some further real Uses of this Humour, and, which I take to be these, to wit, that it is of use not only for the more full Extension of *the Globe*; but is also to keep the inward *Humours* and *Membranes* at their *due and proper Place and Distance*; particularly the *Crystalline*, and that of the *Uvea*, or *Iris*. It likewise, undoubtedly, *humect*s or *moisten*s all the *Membranes* within this *said Space or Chamber*; which would otherwise *dry and shrivel*, &c. It serves to the inside of the *Cornea*, as the *Lachrymal Liquid* or Water does, to *moisten its outside*: And is of great Use to *moisten the Fibres* of the *Uvea* and *Iris*, and to keep it from *drying or shriveling*, as well as in its *proper Form and Place*. It probably also *fills any Vacuities* and *humect*s all within the *Globe of the Eye*.

But in page 326, third Edition, he makes a further Remark on this Humour, which we cannot well, in silence, pass over; his Words are as follow. "The same thing also may be observ'd of the *Aqueous Humour*, which is, indeed, more * *concave* than *convex*: but when the *Crystalline Humour* is removed in the couching a *Cataract*, the *Aqueous* possesses its Place, and becomes a *Lens*; but that refracting Light, less than the *Crystalline*, whose Place and Shape it partly takes, the Patient needs a convex Glass to see accurately."—How, quoth he? *the Aqueous Humour becomes a Lens!* This is a piece of News indeed, and a singular Use we have not heard of before. But how is it our *very curious Author* proves all this? Is it by Dissection, or by Authority from other Writers? No truly, it is *all his own*, his own Observation, and *that's enough*. Well, so then it shall be *his own*; for I dare swear, none will ever *dispute it with him* its being *all his own*. And yet I am still in some doubt, whether he believes it to be *intirely his own*; for I am in some *Suspicion* he takes it from *Monsieur Bril-*

* This would require a little further Proof.

Brisceau and Maitre-Jean's Opinion of the *vitreous Humour* doing the Office of the *CrySTALLINE* after *couching*. And he thus either mistakes their Account thereof, or, otherways, he seems here inclined to give us (in this manner) his Improvement thereon. However, if we allow their Opinion to be of force, and which, no doubt, carries some Probability, and a Strength of Reason along with it, to wit, that the *CrySTALLINE* being beat down, the *Cavity* of the *Vitreous* becomes *convex*, more particularly assisted by the *Pressure* of the Body of the *CrySTALLINE* so *depress'd*, on the side of the *vitreous Humour*; if this then, their now so common received Opinion be thus allow'd, there cannot be any thing in this Assertion of our Friend Cheselden, of the *Aqueous Humour* becoming a Lens, or of its possessing the Place of the *CrySTALLINE*, &c. So that it would, methinks, be intirely necessary for him to *discuss* and *clearly to dismiss* this now so *general Opinion*, before he pretends to establish *his own*; or that he still persist in that *notable Notion*. But now again, as yet to *indulge our Friend*, by laying aside this *French Opinion*, (tho' already so generally received with us) let us then suppose, according to our *improving Author*, that the *Aqueous Humour*, (on such Occasion) falls into the *Cavity* of the *Vitreous*; yet how it becomes a Lens, or how it takes its Shape, is indeed beyond my *Comprehension*: for tho' it fills up this *Hollow*, yet is not all on the side, and above this to the *Cornea*, a great part of a large *aqueous Globe*? Possibly not much less than ten times the Bigness of that spoken of, which fills the *Hollow* of the *Vitreous*. Besides, how can it have the least *similitude in Form*, when we consider the *aqueous Body* to be extended, at least, as far on each side of this *Cavity*? When we consider the *depress'd CrySTALLINE* also to take off some part of its Form? And when we consider the *Uvea*, or *Iris*, which forms the

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Pupil,

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Pupil, to lie in or near the middle of this *aqueous Body*, can any *rational Creature* then pretend this, in any manner, to be the *shape of a Lens*? But let us now consider this whole *aqueous Humour*, which our *Author* is so very ready and willing to turn into a *Lens*. I say then, that as the *Rays* are first converged by the *Cornea*, so they will diverge again in the *Aqueous* consequently, even till they come to the *Vitreous*; so that the *Aqueous*, from hence, cannot, any way, in this manner serve as a *Lens*?

As to the *vitreous Humour*, our accurate Anatomist is not pleased to give us any anatomical Dissection, or Account thereof, only that it serves to keep the *CrySTALLINE* at its proper *Distance*; for which Reason I must refer the Reader to my Account thereof in my *Ophthalmographia*.

I might here likewise observe, which I had like to have omitted, that in page 320, third Edition, he judiciously makes us the following Remark: *Therefore*, says he, *a dilated Pupil is a certain Sign of a bad Eye*. I humbly conceive that our correct Author would say, or mean, a *preternatural Dilation*; which is, no doubt, a *bad Sign*: But might he not with as much Reason also, at the same time, have added, that the *preternatural Contraction* thereof is likewise a *bad Sign*.

Yet I doubt not I have just now advanced full far, and very possibly our Friend, Mr. Cheselden, may not so readily allow, that the *preternatural Contraction of the Pupil* (to wit, the Relaxation of the Fibres of the *Uvea* and *Iris*) is a *Sign of a bad Eye*; because when I reflect, he is pleased to acquaint us, that he has *invented an Operation* some Years ago upon this Muscle, *Uvea* or *Iris*, that is, on the *total Closure* of the *Pupil* (from that Cause.) And this *singular Operation* he has not only been at great pains

pains most accurately to describe in the *Philosophical Transactions*, to that learned Society, whose President is so great a Judge of these Matters of the Eye, &c. but he has, likewise, most accurately and most obligingly described it, a second time to us, in his Appendix to his Book; in all appearance, indeed, a complete *Coup de Maître*, the true Touch-Stone of delicate Operations, not much inferiour to that of the *Drum of the Ear*, particularly in the inflammatory Cases spoken of.

But, methinks, on his so obligingly acquainting us with the Discovery of this so very *ingenious Operation*, it had not been amiss, I should imagine, that he had at least also inform'd us somewhat more particularly of the *Nature of these Parts*, and when in their *preternatural State*? More especially when most necessary to perform this *excellent Operation*? Well, but then, in answer to this, he is so good as to inform us of all this, (as he supposes :) His Words are; * “ Three Figures of Eyes to explain an Operation, which I invented some Years ago, and printed a short Account of in the *Philos. Transf.* and have often practised with Success. The Distemper for which this Operation is perform'd, is either a total Closure of the *Pupil*, which is sometimes natural, and sometimes happens from Inflammations; or else when the *Pupil* is extremely contracted, and the inner Edges of the *Iris* growing to a *Cataract*, or part of a *Cataract* after couching. The manner of doing this Operation is thus; the Eye-lid being firmly held open by an Instrument, a small Knife or Needle, edged on one side, is thrust through the *Tunica Sclerotis*, as in the lower Figure; and then forwards thro' the *Iris*, the Edge being turned to the *Iris*; in drawing of

* Table III. in his *Appendix*, page 19.

“ it out, a Slit is cut, as in the two upper Figures.
 “ When this Distemper is without a *Cataract*, it is
 “ best to make the Operation in the middle, as in
 “ the upper one ; but if there is a *Cataract*, or
 “ part of a *Cataract*, then to make it higher, that
 “ the *Cataract* may not obstruct the Light. These
 “ *Cataracts* are generally very small, and some-
 “ times by reason of their Adhesion not to be re-
 “ moved. The *Aperture* in the middle Eye, was
 “ made lower than the center of the *Cornæa*, there
 “ being an *Albugo* on the upper Part of it, which
 “ made it unfit to perform the Operation in that part.”

Now that he has often practised (this Operation)
 with Success, is what we shall more fully treat of
 hereafter. The Distemper, says he, for which this
 Operation is perform'd, is either a total Closure of the
 Pupil, which is sometimes natural, and sometimes
 happens from Inflammation. The first, methinks, of
 the total Closure of the Pupil, appears to me to be
 a very unnatural State ; and very rarely, if ever,
 fit for any such Operation ; and as to the other
 kind, which, sometimes, quoth he, happens from
 Inflammation, there this notable Operation seems to
 me to be full as unnecessary and improper ; since either
 the Inflammation will, with time, of itself, or by
 proper Methods, go off, or it will not, by that,
 or by any other Means. And is it then the best
 Practice, or was it ever hitherto practised, to se-
 parate or to cut a Muscle (or Sphincter) to pieces, so
 to render it useless, by way of the best Cure for an
 Inflammation thereof ? Is not the Contraction of the
 Pupil (or the Expansion of this Muscle or Iris) ab-
 solutely necessary for the Preservation of our Sight ?
 that is, by such Contraction, to defend the most
 delicate Parts of this tender Organ from too great a
 number of Rays falling on them, when the Light is
 too strong ? Which being true, beyond all Contra-
 diction, this so very necessary Defence then, being ab-

absolutely wanting, I conceive that on making such an *artificial Pupil* as proposed by this *ingenious Operator*, the Patient would by such means, from the want of such proper, natural, and absolutely *necessary Defence*, in some *space of time*, become as much blind (if not more effectually so) than if no such Aperture had ever been made. Moreover, 'tis certain, that Inflammations are readily carried off either by *Art* or *Nature*, and the Patient then again recovers his *Sight as before*; whereas, by this Operation, he never can, from the *Destruction or Transfiguration* of the Parts, &c. besides *Blood following* such Operation and mixing with the *aqueous Humour*, &c.

'Tis true, indeed (until lately) accidentally peeping into this *Author's Supplement*, I altogether imagin'd, that the Operation of making of *new Pupils* had been the *Operation and sole Invention* pretended to only by that *clamorous, noisy Itinerant Taylor*; but on my examining that *dexterous Operator's new Pupil*, which he so much inclined to value himself upon, I found it only to be, the having cut one half of the *Uvea*, or *Iris* through (with his Needle) by meer *Accident or Blunder*, on his performing the Operation for the *Cataract*, which the Patient also labour'd under: And which I have likewise observ'd, as an Accident, having happen'd to myself (*vid. my Ophthalmographia*) on my first performing that Operation. However, this of *Taylor's* was no other than a meer Pretence, (of a Novelty) a downright *Bamboozle*, the better to cover *his Fault*, or *Blunder*. Whereas this, indeed, of the more truly *sincere Mr. Cheselden*, is a real *artificial new Pupil* without *Fraud* or *Guile*, intirely of *his own Invention*; and for which 'tis pity but that he had a *particular Patent granted him* from the *Crown*; or an express *Act of Parliament* for the making of *new Pupils*, to all his *Friends* (when

they've Occasion) as well as to all others who like it, Well, but then, our *Author* is also pleased to tell us, That there is as yet another sort where this Operation is also necessary ; which is, says he, *when the Pupil is extreamly contracted and the inner Edges of the Iris growing to a Cataract, or part of a Cataract, after couching.*—But then our *candid Author* very wisely observes to us, that these Cataracts are generally very small, and some times by reason of their Adhesion, not to be removed. Mighty well ; a very hopeful Operation : Surely our *Author* dares to answer for it, that it will prove so ; to wit, the muscular Fibres of the Uvea or Iris, quite defective of all their Motion, and behind a Cataract growing to these Fibres, or to the inner Edges of the Iris, and sometimes by reason of their Adhesion not to be remov'd. All very notable Symptoms to perform a very successful Operation on ; more especially, when attended with an *Albugo* likewise on the Cornea. Well, be it so then, and now without any further examining the Success of *this Operation in particular*, I shall then wave it ; but as I seem to have required a more full Account of our *Author*, concerning the Nature and State of these Parts, where such Operation proves requisite, or some Account of the Occasion and Cause of such *Maladie* ; I shall here, accordingly endeavour to say something more full on this Head.

The Dilatation of the *Pupil*, which our *Author* speaks of, as a *Sign of a bad Eye*, is indeed a Symptom, (more or less) attending the *Gutta Serena* : And seems to be a Deficiency of the *Animal Spirits*, the *Succus Nervorum*, or that of the necessary Fluids, from their duly supplying or so properly passing into this Part or Muscle, the Uvea and Iris ; so that the Fibres become shrunk or shrivel'd. In a word, there seems in such Case to be a Decay of the optic Nerve, or a Paralysis of these Parts. *The total Closure*

Closure of the Pupil, which is natural, says he ; tho' *very unnatural* I should think ; yet this we will, I say, consider under the same Head as he has put it. This, no doubt, in such *natural State*, (as he is pleased to term it) must be a *total Relaxation* of the *circular*, as well as of the *straight Fibres* of the *Uvea* and *Iris*, and such a *preternatural Extension*, at the same time *void* of all manner of *Contraction* or *Motion* ; must likewise be a nervous *Affection* or *Obstruction*, (tho' possibly, the other Fluids may not yet be so totally obstructed ;) in which case, as well as in the former, we shall readily find the Optick Nerve, or the Sight to be *affected* ; and consequently this Operation will be of little or *no Use* to the *Patient*. Add to this, that I believe it will generally be found, that there is yet further, or some other *Maladie* attending these Parts, as well as that the *Aqueous Humour* will be found to prove *turbid* on this *Occasion*. But in spite of all this or any other such little Observations, or trifling Difficulties, our Author can still go *boldly on* to perform his so *successful Operation* ; thus making his *notable Slit*, or *new Pupil*, which, tho' not performing the Office of *contracting* or *dilating* (as natural Pupils do) yet the Patient, as we are inform'd, will nevertheless *see very well* ; such *Contraction* or *Dilatation*, (according to our present Author) being, it would seem, with him, a meer *matter of Moon-shine*, of little or *no consequence* or *use* : But I doubt not, this so *successful Operator* will be ready enough to observe, That talking, or reasoning, is of small Importance, when he has *so often practis'd the same with Success*. Very well, *Practice in Facts*, are, no doubt, far beyond all other *Ratiocinations*. Let us now then examine a little into the real State, Nature, Truth, and *Multiplicity of the Facts* on this Occasion. In order thereto then, I judg'd it the best Method to

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enquire of Mr. *Cheselden himself*, where the Generality, or several of such People were to be seen or heard of, on whom he had *so often practis'd this Operation with Success?* I accordingly made him a Visit at his House in *Chelsea*, Mr. ——— of the Hospital being present (over a Dish of Tea.) But upon my Enquiry into these Particulars he acquainted me, that he could not pretend to inform me where several of such People were, or what might be become of them, but *that he could bring me many People to testify the Truth of what he had so successfully perform'd on that Head.* In answer to this, *I thank'd him*; but at the same time told him, *That I always made choice of seeing or examining such Patients my self.* Upon which he said, *That he could not name any more than one Person, a Woman who liv'd at Deptford.* Some Days thereafter, I accordingly enquir'd out this Person there, (since married to a Musician, whose Name, as I was inform'd, is *Crome.*) Upon Examination, I found she was about fifteen Years of Age when the Operation was perform'd, being now about ten Years since that time. She also inform'd me, that it had come with the Small-Pox, when about two or three Years old; one Eye being entirely perish'd by that *Maladie*, whilst the other remained in such a very bad way, as that there was but little Hopes from such as then saw it, for the Recovery thereof: So that there remains no Probability to me, of its having had a *Cataract*, as Mr. *Cheselden* with others before him suppose, or assert; which (says he) he knew not till † open'd. From the manner, I say, of this *Maladie* coming suddenly on with the Small-Pox, together with the shutting up of the *Pupil*, &c. it would therefore rather appear to me, to have been this *Maladie* of the Small-Pox, strongly attending

† Or which way then know it if quite closed?

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these Parts, throwing it self on the *Uvea* and *Iris*, inflaming them, and leaving the *Pupil* thus clos'd or quite shut up, (an extraordinary Case which but seldom happens) and which Mr. *Chefelden* thought proper to attempt, without much hopes of Success, as she inform'd me; for being then blind, there could be no great Risk in such *Operation*: by which means she can now see, tho' with some considerable Difficulty, and can somewhat doubtfully make a shift to distinguish a Key of about four Inches in length. Her Sight, however, now, as she acquainted me, being considerably mended since the *Operation*, which I told her, I thought she might in some measure be obliged and indebted to her Husband for, having had several Children or Miscarriages since that time, the *Humours* in general, thus tending more downwards, together with her Increase of Strength by Age, &c. Ay, but, said she, my Husband would scarce have married me, had not this *Operation* been performed. That is indeed another Story, which we will not pretend to determine: But as to the Nature and State of this *Maladie* on performing of the *Operation*, as well as how it is since that time, it would appear to me to stand thus: The *Pupil* being shut, in the manner I have before mention'd, (as an extraordinary Case rarely happening) there could be little risk in opening it; yet why it should not rather (in this Case) have been open'd in the very middle of the *Iris*, so the better to represent and do the Office of the *Pupil*, is what I cannot comprehend, since it was there, such *Aperture* must prove the most natural and the most useful; unless, as before hinted, he had supposed an adherent *Cataract* behind, toward the middle or edge of the lower side of the *Pupil*, which I must freely own I do not see the least room to imagine, from the Nature of this *Maladie*: nay, I may, I think,

think, very safely venture to say, that the Incision appears to be full as low, as the lowermost Part of the *Pupil* naturally comes; so that the *Adhesion* of a *Cataract*, or any part of one *there*, (below this lower Edge of the *Iris*) could be no manner of *Obstruction* to the *Rays* coming in, in their usual manner (through the Middle of the *Iris*) whereas this *Aperture* here spoken of, on the foresaid *Patient*, runs far beyond the usual Breadth of the *Pupil*, not only on each side thereof, but even upwards also, as high as the Operator could well go. So that the *Iris*, (or where it was) on the upper side, appears to be quite *destroy'd*, the whole *Aperture* (now serving for the *Pupil*) being twice the Largeness of the *natural one*, and is consequently twice as large as *truly necessary*; a very great prejudice on several accounts; particularly, that of not *seeing Objects tolerably*, if at all, at any great, or even at a *moderate Distance*; which is indeed this *poor Female's Case*. At which Time, whate'er Mr. Cheselden might yet further judge necessary to be done, than this of making such an *Aperture* for the free Admittance of Light; and that he still suppos'd or imagin'd a *Cataract* there; or that he surmis'd something further was yet necessary to be done, I know not; but it seems *plain*, that after having perform'd the foresaid *Operation* he went to *depressing*, or beating down of the *Crystalline Humour*; which Body, or Humour, -if I mistake not extremely (being I have seen it but once) I then saw it, a *transparent Body*, lying down, *behind* the lowermost part of the *Uvea*; that is, betwixt that, and the *inferior side* of the *vitreous Humour*: yet whether any way *chang'd* from its usual and natural State; or that of its common *pellucid Transparency*, (tho' to me it still appears transparent as naturally) yet, whether, I say, any way different in *Colour*, is what I cannot pretend to de-

determine : But it appears plain to me, that had there less been † done, and particularly in regard to the *Aperture* made in the *Iris* ; which had it been made less (to the Largeness of the *Pupil* only) it must no doubt have been much more to the Advantage of the *Patient*. *

This then was the only Person that Mr. *Cbeselden* could give, or that he judged proper to inform me of, in regard to this Operation, which he is pleased to inform us, was his *Invention*, he has so often *practis'd with Success*. 'Tis true, that a like Case mention'd by him, accompany'd with an *Albugo*, of which I was likewise informed by one of the same *Hospital*, that he saw this Operation very successfully perform'd by our *Author* ; but as that Gentleman who inform'd me hereof, ascribes the first Proposal of the performing the

† I frankly own, I a little suspect our present Operator to be full ready not to do less than necessary, probably sometimes more. He twice in a few days attempted couching a *Cataract* (before ripe) on a Servant to a Person of Distinction, which brought on great Inflammation ; yet would have attempted again : But I advis'd her to forbear, which she did, and now sees tolerably, which he hardly knows.

* Since my seeing this Woman of *Deptford*, I lately spoke with Mr. *Cbeselden*, acquainting him, That I had seen his *Patient* ; and that I observ'd a *transparent Body* lying behind the lower Part of the *Iris* : He readily own'd it to be the *CrySTALLINE*, as I judg'd it to be. Well, but said I, I never saw a *Cataract* like that. To which he reply'd, *they were of all Colours*. Yes, said I, but not quite transparent as that is. To which he made no Reply, but went away. This sufficiently confirms me in my foresaid Opinion, of there having been more done in this Operation than necessary ; and it appears no manner of Question to me, that were that same *transparent Body* or *CrySTALLINE* in its proper Place, she would consequently see much better than what she does at present : And from hence I think it must plainly appear, that it was no adherent *Cataract*, or indeed a *Cataract* of any kind, as at first given out ; but in all probability that alone which I have said, and suppose it to have been, *to wit*, a growing together of the *Edges* of the *Uvea*, or a shutting up of the *Pupil*, occasion'd by the *Humour* of the *Small-Pox*.

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the Operation (on this Patient) to himself, so I am inclinable from this Reason, to suspend my Judgment or Opinion of *this Case*, until I see the Patient, of which there is no great Likelihood that I ever shall.

But it is very certain, that this same Practitioner here mention'd, is somewhat ready to advance that it is no way necessary to satisfy the rest of Mankind on any such-like Subjects, provided that they the *Practitioners* concern'd therein, be *themselves satisfy'd*. In answer to which I shall only say, That I am extremely easy on this head, as to my own Particular, at the same time hoping, that the rest of Mankind are so also; and that they do not so unluckily judge, think, or expect, that there is still a little more due to them, (at least) from such *their Servants*, establish'd on these their *Publick Foundations*.

As to those kind of *Cataracts* where the *Pupil* is *extremely contracted*; such (no doubt) are very frequent, tho' rarely couch'd with any tolerable Success; on these likewise the Operator may be somewhat apt to wound or cut the *Iris*, being the former (in that Case) comes pretty near it, and consequently the Needle must do the like in the Operation. Thus *Taylor* cut the *Uvea* half thro', upon such an Occasion, on a Chair-maker's Servant in *Paul's Church-yard*, from the want of *due Care*, as has been observed; and this *notable Blunder* our modest Operator would have pass'd upon the unknowing World for a great *Curiosity*, to wit, *a new Pupil*: but I soon discover'd the *Deceit*, and of which the like Accident I make particular mention as happening to my self, (*vid. my former Treatise*) proceeding from my want of due Care.

In a word, as to the further Particulars of this Operation, *so newly invented by our Author*, as he

is pleased to acquaint us, Mr. *Serjeant Amyand* told me, that he saw him attempt it twice, in *Guy's Hospital*, which he very quickly perform'd, but *without any, or the least Success*.

I should, in short, I very freely own, be well satisfy'd to see Mr. *Chefelden* perform this *Operation with Success*, before *proper Testimonies*, in the *inflammatory Cases*, (especially) when the *Pupil* is quite closed up, by means of *such Inflammation*; or, in a word, in any other Case, not used and perform'd hitherto by *others*. A small or contracted *Pupil*, with a *Cataract*, being sufficiently often practis'd, (as before hinted) tho', as observ'd also, rarely accompany'd with much Success, any more than those of his: Nay, and where the *Iris* has likewise been cut, whether by Blunder, or otherwise. Now, as to his *Invention of the Knife*, I am fully satisfy'd, that the common *couching double-edged or spear-pointed Needle*, is much preferable, being it cuts on each side, and so to be used as *occasion requires*.

As to the young Gentleman mention'd by our *Operator*, which he informs us gave those *singular Accounts* of the Representation of Objects, after his being couch'd, they are much the same with those of others, who have had the misfortune of being *born blind*, or very young when the *Cataract* first came on, and so thereafter have been couch'd. Now, as to this Gentleman's seeing, I am sorry to say for his sake, that it is still but very *imperfect*, and far from being able to read or write therewith; which, says our *Author*, he thought only worth the undergoing an *Operation* for: It seems even to be with considerable difficulty he can guide himself along without some Assistance; and I am apt to believe, that he still knows *Puffs* (whom our *Author* mentions) much better by *his feeling* than he does by *his seeing*. But here it may not be
amiss

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amiss I observe, that six Months after the *Operation* on the last *Eye*, an Accident happened to this Patient, (as I am credibly inform'd by the Parent,) which Mr. *Cheselden* was no way able to account for, or any how to inform them, what the nature of *such Ailment* should be: The Youth said, that he felt something in his *Eye*, which seemed to him to give a *Crack*. The *Globe of the Eye* was much inflam'd, and accompany'd with great Pain, a sort of Cloud appear'd forward, or on the outside of the *Pupil and Iris*; the *Aqueous Humour* at the same time being very turbid, accompany'd with a great Flux of a *watery Humour*, probably from the Lachrymal Gland. This *Accident or Maladie* which Mr. *Cheselden* seem'd quite at a loss to account for, appears plainly, (in my Opinion) to have been an *Abscess*, or a *total Suppuration*, or purulence of the *Crystalline Humour*, which possibly it might even incline, or tend to, before couch'd. The *Crack* which he seem'd so sensible of, might probably be on its breaking; the whole thereof might in all likelihood also pass through the *Pupil*, so as to appear like a *Cloud*, thus term'd by such as inspected it; and in this manner likewise rendering the *aqueous Humour* in general turbid; which however in a few days thereafter became clear, the said Humour settling to the bottom; and the Patient, his *Eye*, and *Sight*, remaining much as before this happened.

But now, whilst I am yet treating of Operations, it may not be amiss I endeavour to set Mankind a little right, as to their vulgar Notions on this Head; which is, that of a *fine Hand*, a *clever Operator*, &c. whilst at the same time they are ready enough to admit, that he has *no Head*, &c. This then makes me call to mind, that noisy, and so very notable *Operator Taylor*, who many have been pleased to call *so extraordinary*; and

in relation on the EYE, in his Anatomy. 9

and to admire him for his being so very *bandy, clever, &c.* Nay, I cannot even here pass by the mentioning my old Acquaintance Mr. *Serjeant Amyand*, who has even told me as well as others, that he must still do that Justice to this *Operator*, (however defective otherwise) much to commend him for such his *Adroitness, &c.* and particularly, (continues he) in the so steady manner of operating, as by that of resting *his Elbow, &c.* Mr. *Serjeant* should, no doubt, be allow'd to be a Judge of Operations in general; yet in this Particular I must freely own, I can hardly allow him to be so; or that he has not so duly consider'd it. In the first place then, as to the resting of his *Elbow*, in the Operation of the *Cataract*, I am fully convinced that it is *quite wrong*, being of opinion, that the said *Elbow* ought to be *entirely free*, and *at full Liberty*, whether it be for the advantage of *occasionally retiring or turning it*, whether *obliquely, sideways, upwards or downwards, forwards or backwards*. Nay, I cannot imagine, but that were it necessary, or any better to rest in such manner in this way; but that it would also, methinks, be full as proper, and requisite, *in bleeding* or in most, or any of the *lesser Operations* of Surgery; a Practice contrary to all Experience, as well as against the common Opinion (hitherto) of all the most *noted Operators*. The next thing to be observed, of this same *Showy Braggadocio Operator*, is, that in order to *couch*, he first makes Incision with his *Lancet*, before he introduces his *Needle*, (also much commended by some, who would willingly pass for knowing something of the matter) tho' a Practice still more *stupid* than the former; since by making the Orifice larger than the Needle, (besides this latter Instrument very readily lacerating, or doubly cutting the Parts in entering that Orifice) on pressing the Globe of the Eye in

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the Operation (for the keeping it more steady) the *aqueous Humour* will thus very probably more easily, and readily, be most of it *squeezed out*; and yet more particularly by the use of the *Speculum oculi*, likewise full as improperly practis'd by him, because it presses still more than the *Fingers*. Thus, *cry they*, he most *dexterously* and *sedately*, without the *least Concern*, turns the *Backside of an Eye forward*, or nicely *screws out*, the *Crystalline Humour* with a *golden Screw*, &c. whilst such notable *gaping Scioli* are gravely looking on, *staring* and *admiring* the *Dexterity* of his Hand; whilst he is very candidly valuing himself on the vast *numbers of Eyes* that he has put out, or the *Crowds* of People that he has *blinded*. The wise By-standers at the same time, being astonish'd with Wonder, *cry out*, yes, surely, he must be very greatly knowing on that account; tho', were I to *choose*, I should much sooner advise any one to go to the good Woman of *New-street*, far less liable to play such *audacious Pranks*.

But what I must here observe, in relation to the *Dexterity of Operators*, (so very much and principally minded by the Unskilful) it is not so much then the Quickness, or seeming great *Dexterity* of the Hands of an Operator (serving to hoodwink the By-standers) that is in reality so much required, as it is that of the true *Sagacity and Judgment of the Head*, which is so very absolutely necessary. It is that is the principal in this, as well as in most other Affairs of any consequence; and he who has that, the Hands will follow such Directions *with Safety*: And without this the best Hands will commit *infinite Blunders daily*. The Devil himself may depend upon an Operator (for me) who only has *good Hands*, and who has *no good Head also*; Or, at least, a *good Head present with them*, ready to assist and advise *such Hands* with proper *Cautions*,
or

in relation to the Eye, in his Anatomy. 99

or *judicious Directions*, if so to be advised, or to take Direction, not being accompanied with an *obstinate vain Head*, &c. He who has a sufficient Sagacity, a *judicious Head*, will rarely undertake what he knows he is not duly instructed in. Neither is it greatly material, whether it be so very *neatly, quickly or dexterously performed*, so it be done with *Judgment and Safety* (tho' even that it might have been better perform'd) yet if no very *gross Slips or Blunders*, still that same Sagacity and Judgment here spoken of, will make amends for the Whole, in the Cure. Whereas from the Deficiency of this, even tho' at first better perform'd, the Patient often, sooner or later, perishes; and thus I have known some of the best Surgeons, with us, very unhandy in the Operations, as *Bernard*, &c. It is but too common for the most forward People, with none of the best *Heads*, to be the most enterprizing and *ready in performing of Operations*; undertaking, and headlong running through both thick and thin, without the least Reason, Fear, Wit or Judgment. Thus sometimes *bit*, sometimes *miss*, *Luck is all*.

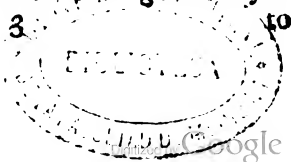
Now, if after what has been advanced, it be as yet alledged, that whatsoever Faults I may pretend to have found in relation to our present *Author*, here mention'd, Mr. *Cbeselden* his Knowledge, or the operative Part with regard to the Eyes; yet that I cannot certainly, with the least good Ground, have any other Remarks to make, than that of the highest Success, in the *Operation of Lithotomy*, which is so *universally agreed to*.

This indeed seems to be altogether out of our present Purpose and Design, tho', methinks, it may even as properly come in here, as that which he has introduced concerning the *Eye*, into his *Anatomy*; and possibly, I might even be able to say

full as much on that Head, and with as much Reason too, having seen and apply'd as much even to that Part also, as any whatsoever, who have not made it their real and constant Practice and Business of operating; and this too with most of the first Masters in *Europe*, in that way: Nay, I have even my self, formerly, gone some lengths therein with Reputation. But on a more serious Reflection, That some must *still die*, or in short, *be kill'd* by this *Operation*, even with the most successful *Operator*, I freely own this made me more ready to decline the going on with any *such Practice*; more especially, as I not long thereafter laid entirely aside the further Practice of *Chirurgery*, or of any *Operations* whatsoever, thus to think of nothing more than the Medical Part. As to Mr. *Cheselden's* vast Success in this way; such as that of cutting thirty, of which only one is said to have *died*, I need but remark on this Head, That had he or those of the *Hospital*, thought proper to give us, *Day or Time, and Place of Abode*, that such thirty were *cut*, and *none* dead during that time, it would have been a more full Satisfaction to such as inclin'd to examine, and to be more thoroughly satisfied of the Veracity of *such Assertion*. May 1728, says our Author, *Four cut in the Presence of Monsieur Morand, one of which named Money died; the Names of the other three*, continues our Author, *I have forgot*. Very good indeed! Well, say the *Friends* of our *Operator*, this is surely altogether like himself, in *his own careless Way*. Mighty well again! However, without examining quite so closely in this, as in the *Eyes*, I am ready to believe him *successful* herein; yet I must beg leave to suspend my Judgment as to Number, which as averr'd by him, far exceeds that pretended to by the so *celebrated Colegiani of Florence*, whom I have often seen to operate, with great Success, and whom

whom I should have preferred for a *Head and Hands*, with his singular *Humanity and Candor*, before any other I have yet seen or known in *France, Holland*, or any where else. Such Account also far exceeds that of *Paris*, commonly computed at one *in five*. Ought not Mankind then to be well and fully satisfy'd in such an extraordinary Fact? However, if we are entirely to rely on their own Testimony, or those of their *Friends only*, as they seem most inclinable we should; why ought we not as well then to give full Credit likewise to the Testimony of *Albinus*, that eminent *Professor*, in relation to the very extraordinary Success of my *Instructor*, the so greatly famous *Professor, Row, or Ravius?* whose Method Mr. *Cbeselden* owns principally to follow. If then we credit this said Testimony, (which probably ought to be esteemed, at least equal, to those given by our present *Operator*;) the Success of this able *Lithotomist* was vastly superiour to that of Mr. *Cbeselden*, not exceeding two or three who died of a great many Hundreds who were *cut by him*; which, if so, or any way superiour to the Number pretended to by Mr. *Cbeselden*, methinks he then should accordingly entirely rather follow the Method of the said *Professor*, than any way to vary from it, as alledged by him. For my own part I must, as hinted, beg leave to suspend, at least, my Judgment on this Particular, either as to one or t'other. However, it appears in the mean time observable, that those mention'd by Mr. *Cbeselden*, in his Book, as successfully cut, are in general *Children*, which will, no doubt, *succeed the best*.

I would willingly flatter my self, that there is not such frequent Occasion for this *violent Operation*, as Mankind do commonly imagine. I freely own, and, I think, I have some *good Reason*



to be of Opinion (that if not effectually to be cured without cutting) they may in general be made * *so easy*, as not to be under a Necessity of being cut, from the Violence of Pain : Particularly, if, I say, they are any way governable, so to *abstain* or take what is *necessary*. As to such who cannot so conform, they are at full *liberty* to go on in the fore-said Method of *being cut*. However, I must likewise agree, that in the case of Children it seems to be as yet somewhat more requisite, because it is more difficult to confine and regulate *Children*, or *young People*, in their manner of living; and thus if not in such way easily to be *relieved*, it seems too tedious, and severe a Method to be followed by such, *during Life*. Besides, as observ'd above, *Youth* being on their side, do consequently most commonly succeed much better in the *Operation*. To this then I would beg yet leave to add, as to this Operation in general, without applying it to any in particular, that should I, by meer Accident, find (without the Trouble of Enquiry after the common Success of an Operator) that the first two I have so known, *died* of the said *Operation*; and that no one else had so happen'd in my Way, or Knowledge, of the *Successful gender*; in such Case, I conceive, it cannot well be thought extraordinary if I should at least suspend my Judgement, until I am by Accident, or otherwise, confirm'd of the great or extraordinary *Success* of any such.

But now I may here, perhaps, appear to have advanced more than what seems to be absolutely necessary; tho' at worst (what we have said of the Stone) methinks, it ought but to pass with our

* Or even without undergoing such a nauseous Method, or the taking such a load of fulsome Stuff, as that of Mrs. *Stevens's*; which, however, when properly us'd or administer'd does good; whereas improperly us'd (or improper Patients) it does hurt, not distinguishable by her.

Author

Author, as an Equivalent for his on the *Eyes*. Tho' I, in reality, rather intend it to the *Publick*, thus to shew that all things are not always according to the *common Representations*, and usual received Opinions of the World, whether by *dint of Friends*, or otherwise. However, I must at the same time assure my old Acquaintance, our present Author, that whatever length he may imagine I have gone in this, I must likewise here assure him, that I could still have gone a good way further, had I inclined it; and even tho' possibly I might have some Reason so to do, from his manner of expressing himself; such as *that he would as willingly be writ against* (by any one) *as not*. I cannot well say how favourable this ought to be interpreted, whether he may mean, That he would as willingly thus *be taken notice of*, by such especially who may have acquired *any Reputation in the like way*; which might accordingly be of some service to him. If so, I am satisfy'd. Since I freely own, I have the Vanity to believe, that my Reputation in the World (is at least in this way of the Eyes) full as good as his is. But if he would be understood in any other Sense, then it is no way less proper what has been here said. He indeed observes, justly enough, that *an Author either writes what is Truth, or he does not*. And so, says he, *it will stand or fall accordingly*. And thus consequently, *we ought to be the less troubled thereat*. Mighty well, and greatly true. Yet I am still a little ready to believe, that he, as seldom as his Neighbours, is much fond of having all Truths (that relate to him) *freely told or laid open*. However, I am entirely willing, and sincerely desirous, that these Thoughts should stand or fall according to that *Truth* there is *found to be in them*. Neither would I have our Author vainly to imagine, that I thought it *worth the while* to write against him or his No-

tions in particular, but that I have mention'd him with the others hinted at, for the Reasons already spoken of; that is, *principally to defend myself* in such Parts, where it may be judged, he, or they, may any way oppose my *foresaid Opinions*; or seemingly to clash with such Thoughts there laid down. Well but then, he is, in the next place, pleas'd frankly to tell me, that if I write against him *he will not answer it*: Founded possibly on the *foresaid Maxim*, of being either *true or false*, and consequently not necessary to be *reply'd to*. Extremely well then: I am fully satisfy'd, and I hope the World will be so also. *Replication or no Replication*, will be equally easy to me; since I write not for his sake, (unless he inclines to profit thereby) but for the sake of Mankind in general; who are accordingly welcome to receive it, or to make what use thereof they shall judge most proper. However, this I will also at the same time assure him, in answer to his *not replying*, That I likewise promise him, should he alter his Opinion in that, I intend not to trouble him or the World with an Answer thereto, unless he should write very much to the purpose, which I am in no manner of pain about; and most probably he does best to judge as he does.

But now, whatever Faults I may have found with our said *Author* Mr. *Cheselden*, I would not therefore have such who have not appear'd in *print*; or in some such-like way, at least (some how attempted publickly to instruct the World) vainly to *think, suggest, or imagine*, that such *Errors* found in him, do consequently *add to their own Merit*. No, no, that is by no means to be allow'd, since had they so appeared in print, who knows but that it might still have prov'd worse? Let such first fairly enter the *Lists* (so to stand the common Criticism

ticifm of Mankind) without which I cannot imagine they have any greater Reason to value themselves, &c. Nay, I will yet go further, which is, that for all what I have here advanced in relation to Mr. *Chefelden*, I know not whether as an Operator, especially in that spoken of, he may not be as good as any I know. And were he, as before hinted, properly assisted with the Judgment and Advice of a solid and *sagacious Head*, well knowing in these Affairs, I think there is no room to doubt of its being a very considerable Advantage to him, as well as to those he might have to do with.

It will then be observable from what has been here said, the great Improvements which have been made by this worthy Person, even tho' most part of his Life *Chirurgeon* of so very noted an *Hospital*. As to the Affair of the *Eyes*, others (not of *Hospitals*) have generally been the most noted this way. Neither would I vainly or positively pretend to advance, that the Publication of my former small Treatise of *the Eye* was of any advantage to him; but I hope it was *no disadvantage*. I shall also observe, that those even the most noted for the Operation of the Stone, have not always been of or belonging to *Hospitals*, such as the *famed Professor Row*, nor was *Cyprianus* ever so that I know. It is indeed readily the most forward and bustling Genius's who have attended or seen somewhat of such Operations, who generally prove to be the Pushers at the common Operations in this way, whether they be of *Hospitals* or otherwise.

Now, howsoever hard I may appear to have bore on our *present Author*, yet were I to find fault from any particular Humour, I should have express'd myself, as well as to have carried my Remarks a good way further; but if I could of him, so certainly I might likewise of many others, even
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of *Hospitals*. Since it is, in short, *Judgment*, and a great *Sagacity*, which is the principal Knowledge to prevent such from committing of very great *Blunders*; whether they are belonging to an *Hospital* or in a more *private way*. For Example; should any young Woman happen to be troubled with some Pain, accompanied with a slow Tumour in one of her Breasts (more or less at different times) as I have frequently observ'd, and which I have often judged and found rather to be *Rheumatic*; or from common *Obstructions* of the *Menstrua*, than from any other *Cause*: Now should any of the Profession, I say, whether even a *Country Surgeon*, or some one or t'other, still more in a *publick way*, (supposing such Ailment to be what you please :) in short, *first salivate* such Person for it, in order to *cure it*; and when disappointed in such a *Project*, next go on to *cut out such Tumour*, to wit, a great part of the *Breast*, (under the Notion of being of a cancerous Nature, &c. tho' without the least just Ground, as appears, &c.) when soon after the Cure or rather the healing up of *the Breast*, the like Humour or Pain should *thus shift*, and occasionally to attend *her Stomach*, in like manner as it before had done *her Breast*: What could reasonably be judg'd of such a *wild, injudicious Proceedure*, but that the meanest *Country Surgeon* could scarce be capable of doing the like; *far less several*, &c. And having thus at last shrewdly got rid of it, so finally leave it, and is thus turn'd over to the *Doctor* to manage it.

Neither ought any such, methinks, to be over-forward, in like manner, in *cutting of Lips*, &c. from Suspicions of their being *cancerous*, (more especially, if forewarn'd not to do it,) since, if not cancerous, it is to be cured without *cutting*; and if *cancerous*, it will be made *worse* by so doing.

I am very sensible, it will readily enough be advanced, that were we to scrutinize very narrowly into the Practice of any particular, there would be no want of a sufficient Field; which is, no doubt, most certainly true. But then, methinks, should any such *Blunders* be committed in *Hospitals*, there is not any such room for *the like Pretence*. For without supposing any such *Practitioners* ought to be better than others (according to the common Opinion; which, no doubt, they should be,) yet as they have the particular Advantage (and no doubt do) of consulting one another, not only as *Surgeons*, (of which there are several in all great Hospitals) but even also the *Physicians*: So that should such be guilty of any gross *Blunders*, it is surely *far less excusable* than in that of any *private Practitioner*, who rarely has any such Conveniency in the generality of *his Practice*.

Now, should there then, in like manner, happen such a Case, as that Physicians as well as Surgeons are divided in their *Opinions*, whether a Case may be *strangurious*, or principally a *venereal Ailment*; or whether there may be an *Ulcer* in the *Bladder*: and that one Person more forward and pretending than *the rest*, boldly asserts, That there is an *Abscess* somewhere in the *adjacent Parts*; tho' without any the *least Appearance* or Symptom on the *out-side*, or by *Tactus*, &c. only because some little *yellowish glary Size* is voided with the *Urine*, after lying, during the Night there, and no otherwise. And in like manner likewise concludes, the whole to be a *venereal Maladie*, and curable only by *Salivation*: Pretending such his Opinion to be confirm'd, because of a *Tumefaction* in the *Scrotum* (without any other Symptom) which last is accounted for from the *strangurious Ailment*, or Humour being hurried down there, by *forty Miles violent riding* in one day, such *Tumefaction* immediately following thereon.

on : And tho' the Patient might be otherwise sufficiently *gallant*, yet there appeared not any the least Symptom from which it could be judg'd to be any way *venereal*. So that, in opposition to this forward Practitioner's Opinion, it was on the contrary judg'd to be altogether a *strangurious Case*, accompany'd with such *accidental Inflammation* ; and that Salivation, consequently, could be no way necessary, or any way contribute to *the Cure* ; even had there been an *Abscess*, as alledg'd by him ; tho' without the least just Foundation thereof. Nevertheless, I say, from such a positive Perseverance in his Opinion, together with the Approbation of others, also in the like *publick Way*, much *accustom'd to Salivation*, ready enough to give Sanction to such like Method with a Brother, as altogether harmless and *innocent* as the eating of *Bread and Butter*, were it for a cut Finger, &c. Thus the Patient then, having undergone accordingly, a thorough *Salvation*, of at least six Weeks continuance ; he found as I had predicted, the Difficulty of making his *Urine still to remain*, that is, he in short thereafter, still found his Ailment to be much as before the *Salivation*. And so very plain appear'd this whole Affair, that instead of the foresaid *swelling* in the *Scrotum* being carried off by such-like Method, that some Weeks afterwards, it came to a *full Suppuration*, and the *purulent Matter* contain'd therein, discharged it self by its *Aperture* there ; which I imagine, plainly enough proves, that *this Salivation* not only rather tended to *weaken or injure a tender Constitution* than any good it did ; but particularly hindered and *interrupted Nature* from doing its proper Office : As well as that this, I think, with the former, is *sufficiently convincing*, that the *Maladie*, for which he was *salivated*, was not *venereal* ; since the said Humours in the *tumescy'd Scrotum* dis-

discharg'd (after the Salivation) by the meer Effect and *Power of Nature*, in spite of all such *artificial and cross Endeavours* thus used to prevent it. In fine, upon Consideration of the whole, the *Salivation* plainly appear'd to have done no manner of *Service* (if not some Injury to the Fabrick) and that there was nothing *venereal*, seems to be more fully proved by no *Salivation or venereal Course* being thereafter *used*, or any way judg'd *necessary*, for his *further Relief*: The same *Maladie* still remaining (excepting that of the said Tumour, discharg'd as before) being much in the same State of Ailment, to wit, the like Difficulty of making *Urine*, with the continued *voiding of glary Size*, &c. even as at first.

From hence, I say, any Person of Judgment, or Sagacity, may easily imagine, how much they ought to *value* or *rely* on any such *Practitioners*, for their *Præcognition*, or *Prognostication*, how soever well adorn'd with *Name* or *Title*: And still yet more, especially, (when consider'd) after the having been so *battled* and *opposed* (as said) in their own *obstinate Assertion*.

Thus then, should any one as noted in such like way, be as fully assur'd, or foretold, of the absolute Necessity of the *lopping* off of a *Member*, (to shun risk) at the same time, specifying the particular Place, where it *behooved to be done*; yet should such Practitioner, notwithstanding such positive Advice, make *three different Loppings* thereof, even in two or three Days betwixt each time, and lastly come to the very *foresaid Place*, so specify'd; what can we think of such, for their *Knowledge, Judgment, or Sagacity*?

Now, if any other such (tho' possibly not in Being at present) in the cutting for a *Fistula*, should at the same time, likewise cut into the *Bladder*, and so *during Life* make a much *worse Fistula*, with
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the *Urine* for ever after to pass that way: What shall or can any *impartial Person* then say, or judge, of the *Dexterity, Judgment, or Knowledge* of such, either as to the *Cutting or the Cure*.

And next, I should be glad to be inform'd, what considerable Improvements there have of late, or many Years, been made in any of our *Hospitals*? 'Tis true, indeed, we are lately *advertised*, That there is * a very ingenious *Instrument just invented*, for the cutting of the *incompleat Fistula in Ano*. I shall not chuse to dwell on the word *incompleat*, whether or where-ever such *Fistula* may be, since the *incompleat one of the Anus*, will, no doubt, always differ from the compleat one of the *Nose, &c.* But I should rejoice to understand that Mankind find they make *speedier Cures*, on *incompleat Fistula's*, by the Use of this *new Invention*, than they did before: Albeit, I must freely own, I should have thought we should still have been much more obliged to this *knowing Person*, had he found us out some Method for a *Cure*, without the Use of *any Instrument* or *any cutting* at all; which I also own, I am not of Opinion it is *impracticable*. Nay, I have even good Reason and *Experience* to believe it possible, in the generality of Cases; and if so, such Method, no doubt, ought first so to be attempted; which if successful, would prevent any such *ill Accidents* happening by *cutting*, as before spoken of. Neither do I imagine, that even inward *Fistula's*, not to be *come at*, by any *Instrument*, are always *incurable*. But I shall leave speaking further of this Affair at present, since it would carry me too far, beyond my intended Purpose.

Mr. *Tanner*, Surgeon likewise of an Hospital was (in his Time) a mighty Pretender to *fine In-*

* Mr. *J. Frecke*, F. R. S. senior Surgeon of *St. Bartholomew's*.

ventions

ventions of Instruments, &c. tho' I must as freely own, I never could observe any one of them *worth the Notice.*

Now, although what we have here been saying, may more particularly appear to appertain to *Surgery* than to *Physick*, somewhat even of that kind is not possibly the least applicable to the present Subject. However, this, I think, may at the same time likewise be observ'd, That *Physick*, and what is commonly understood to be *Surgery*, are, in general, so very much blended together, and especially, in the most of these very *Cases* we have before mention'd, that it seems pretty hard to determine, which is which; or how the one is to be distinguish'd, so as wholly and entirely to be separated from the other. Nevertheless, this, I think, may freely be said, that it is the Business of a thoroughly knowing, and properly *well-accomplish'd Physician*, not only justly to understand, or to comprehend, but to be able also to give proper *Directions*, what is most fit to be done, on either Occasion distinctly, as well as when it is altogether a *complicate Case*, &c.

As to the quoting of *Cases*, generally agreed to belong to the *Physicians only*, it would be *endless*: Besides that, in most or many of such *Cases*, as *Fevers*, *Small-Pox*, &c. it but rarely appears *very plain*, whether they have in reality *done good or hurt*. I know not if I have not once *heard* or *dream'd* of some *mathematical Person*, who made Calculations in the following manner: That Mankind in general might be thirty times *very ill, sick, or ailing* before *they die once*. That, but too commonly, twenty-five times in thirty *Nature* may readily get the better both of *Physick* and *Physician*; and that the rest of the thirty times, it may be pretty hard to determine, whether he has done *good or hurt*. But we *can die but once*, as *Moliere* says,
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il faut mourir en form, that is, according to Custom. Yet, is it not a little surprizing, to see how the Force, and Power of Custom has inverted the Nature and very Essence of Things? Might not a Man be reasonably and *strangely amazed*, to see, instead of some venerable, grave, sage-like Hippocrates, to be at the head of an Hospital; there to *preside, take care, to over-see, regulate, order, and direct* the deplorable Cases of the distressed Sick and ailing Part of Mankind; perhaps, in lieu of such Person, I say, to find some *unexperienced, fleeing, or giggling* kind of young, boyish Fellow, constituted or chosen there to *act* this so *sage, grave, and venerable Part*? And this meerly, because, truly, he may a few Years have read a little of the *Formality of Physick*; or, perhaps, is also learned enough to put an idle *Syllogism in form*, and so gets a *Diploma, or Certificate*, from the Professors of some University (who possibly themselves, never saw, or knew, what an Hospital is) that this worthy Person, they thus recommended is proper, *fit*, and perfectly capable, *for such, or the like Charge*, as that of the *due Care or Cure* of Mankind in general, in whatsoever Degree or Sense you please. And so by this kind of idle Custom (seemingly indeed, a meer Banter or a Burlesque on such Affairs) that thus by the Dint and Power of strong Recommendation from others still, who know nothing at all of the Matter, he is so here recommended (at the common Cost of the distress'd Poor) in reality among Friends, to learn his Business, and to gain some Experience, but particularly to get into practice; by such Feather being stuck in his Cap. Whereas, a Person of the like Charge ought, indeed, duely to have run thorough, and well to understand, all that belongs to Physick or Surgery; and as Surgeons properly are but the Assistants or Deputies of the able Physician, so if any Dispute or Difficultys in Practice do

do arise amongst the *Surgeons* of an *Hospital*, the *Physician* or *Physicians* thereof, are (or ought to be) the only proper and competent *Judges*, to *decide* all such Differences; and not the usual *Directors* or *Proprietors* of such *Publick House*, entirely unacquainted in what relates to *Physick* or *Surgery*. But as times go, we well know, it is not so much Knowledge that is the Question; but that it is *Interest* and *Recommendation*, that governs the whole, in *Physick* as in most other *Affairs*.

But without carrying our Remarks any further, on those of *Hospitals*, in relation to their *Practice* on *private Persons*, &c. we might probably also be able to say something of those of much superior *Rank and Dignity*, whether in *prognosticating* or *operating* on any *Planet* of the first *Magnitude*; but it being advis'd as the best and wisest way, to hush up such Knowledge from *common Eyes*; and that the *Great, Powerful* and *Wise* have approved the same as the most proper, *so now do I*.

From the whole then, which may here have been observed, it may easily enough be conceived, that it is not from the being in an *Hospital*, or in any other *dignified Station*, that gives a Person *Capacity*, (that being natural) it is, (after having been sufficiently instructed in what he pretends to) that *Sagacity* and *just Method* of *observing* (not to be acquir'd but from Nature) being that alone, which will, and must render him, *truly knowing*, and *far superiour* to all others, (inferiour in this) tho' even accompanied with e'er so much *Practice*, which from such Defect, will prove *proportionably indigested*: which Multiplicity of *Practice*, as observed, goes principally, if not altogether, by meer Dint of Recommendation, or the Power of Friends; and probably, he who knows the least,

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whether from the Tedioufness of the Cures, or otherwise he readily will make the *most Money*.

Yet whatsoever I may have here advanced in relation to *Hospitals*, it is principally meant rather to set Mankind right in their common mistaken Notions of Things, than any otherwise intended; such as, *That because a Person belongs to an Hospital, he must therefore be the most knowing*; or that, *the only or great Improvements are made by such*. None can have a greater Opinion of *Hospitals*, (when well conducted) or of such *Charities*, than my self: Neither are there many, I may, I believe, say very few, who can equally pretend to brag, of having seen the Practice of so great a Variety of *Hospitals*, as I have done; having spent considerable time in those of *France, Flanders, Italy and Amsterdam*. I have then observed, that an *Hospital is a good School* for Youth to learn (at least) the Generals of their Business, in not having otherwise seen a Sufficiency of Practice; especially in *Surgery*, albeit that in all such Places they have little else than a somewhat over general *Rotin*, three or four *usual Medicines* administer'd, in most *Physical Cases*, with a pretty quick way of passing the Sick over: and so in *Surgery*, it is nearly alike; and they but very rarely go out of that general Road for any Particular: If it *bits*, 'tis well; if not, there's an end, *dead or discharg'd*. I should be glad, I say, to be instructed in the *Improvements* made in ours, during our own Time; I am very sensible, that great *Interest* is commonly made to get to be *Physician* or *Surgeon* of 'em; by such, especially, who are too commonly *No-vices*, or who have seen, or had, but little *Experience in Practice*; by this Means intending to *acquire some*, as well as thereby to attain to the *Feather in their Cap*, so to acquire *lucrative Practice*, the principal Affair in question: For as to the

the Improvements they make, or the *Instructions* they give to the World, that seems to be the *least of their Business*. Improveable *sagacious Geniuses*, who have had *proper Education*, will still improve, tho' never in an *Hospital*; and those who are not so, will never improve, (to any purpose) tho' all their Life-time *there*. Thus, some of our most *eminent Practitioners* we might name, as *Ratcliffe* (I think I might add * *Boerhaave* also) besides many in our Time; *Shipton* in *Surgery*, &c. who never belong'd, perhaps hardly ever properly to have seen an *Hospital*. Nay, I am inform'd that the last named, never serv'd any *eminent Master*, but by the *Dint of Reading and Industry*, is accounted amongst the first. The World is as much improved (at least) by these, as by those of *Hospitals*. Nor would any such, or others in *great Practice*, accept of any *Hospital*, because they have found they could do their *Business* full as effectually without: And thus, those of *Hospitals* drop 'em, when they find they have sufficient *Business* otherwise; neither is it to be expected, that in such a hurried way, as that, betwixt an *Hospital* and *private Business* (especially in this great Town) that great Improvements are to be made. Neither is it in very great Hurry of *Business* in any way, that it is hardly ever done †, since proper *Observations* require a *due time to digest them*; and such who do make them, will readily produce some *such Fruit* to the

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World.

* No *Hospital* in *Leyden*, unless we term it so, where 4 or 5 sailing People only, are attended by different Physicians in their common Turns.

† Much *Practice* is got by being much in Publick, or with Mankind. Observation and Writing requires Time and Retirement. In fine, to do well, there ought not to be too much of one or t'other.

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World. So that the greatest *Improvers*, the best *Writers*, have rarely, or ever been the *greatest*, or most *buried Practitioners*. Thus a Person may as well have *too much Business* or *Hurry*, as *too little*, in regard to his real *Knowledge* and *Improvement*, or that of the *Benefit and Instruction* which Mankind do truly reap thereby; such wanting, I say, time proper, (if not Capacity) to digest their Practice, and to correct their *Blunders*.

It may not be yet altogether improper I further add, in relation to the Affair of the *Eyes*, that what I know of that Affair, has been more owing to my own *Application, Reading, Industry, Practice and Consideration*, than to what I have *seen or learn'd in Hospitals*: And I do at the same time as freely own, that I never learn'd from, or ever saw any of these call'd *Oculists*, to perform an *Operation*; neither could I ever in the least imagine it to be worth my while so to do (especially since my * *Application thereto*) only to have *seen ridiculous Operations perform'd*, by any such *ignorant audacious Pretenders*, since I was well satisfied of what was practicable, or possible to be perform'd with Success, by the *Power of Art*. Who, indeed, in their *Senses*, would choose to be a *Testimony*, or to countenance such *audacious forward Undertakers*, in their putting out the *Eyes of Numbers of ignorant, poor People*? So much, (instead of that) deserving the *severest Resentment of Men*

* Nor can I see why Physicians should not make this as necessary a Part of their Study, as any, unless it be, that they judge it too nice and difficult a Study to attain to any considerable Knowledge therein: And so chuse principally to apply to such Part, or Maladies only; as those, where, it is hard to say, whether they have done good or hurt; in a word, which Nature herself principally cures, or that the Patient dies.

Men of Knowledge, if not even that of the *Publick* : And still, I cannot well forbear to add, that in whatsoever manner I may have attain'd that which I know, I readily own, I have the Vanity to flatter my self, that I know not less (at least) of this Affair, than *any abroad* ; and as for those here at home, I have, I think, sufficiently taken notice of the *most noted* of them, and of *their Knowledge*. If *mistaken* in my *Opinion*, they are welcome, whether *at home, or abroad*, to demonstrate to the World and me, that I am so. Nay, such Knowledge indeed, is what such who pretend to understand as a *Physician*, that is, to an universal Knowledge of the *Maladies* incident to *human Bodies*, should be master of, or indeed what every one *such* ought to understand, who pretends to know or give general or particular *Directions*, whether for that of *the Cure of inward Maladies*, or that of the *advising and directing* of the proper *Operations*, &c. as he shall observe to be *necessary*. Nothing surely can appear to be more *stupid* and *ridiculous* ; or that can more fully demonstrate the Ignorance of such *common Practices*, such an idle way of Thinking, than that, for Example, of a *Gouty, Rheumatick*, or other like Ailment, lying *growing inwardly* on the *Brain, Stomach or Bowels*, being then call'd by a *different Name*, and accordingly supposed to be a different *Maladie*, as that of a *Cæphalagia*, or violent *Head-ach*, swooning *Fits*, *Stomach-pains*, *Cholick*, &c. at which time straight send for the *Physician* ; whereas, no sooner is the same Humour thrown into the *Surface*, or the *Extremities*, in Inflammations, *Tumefactions*, or other *muscular or cuticular Appearances*, than it is straight send for the *Surgeon* ; when the same Humour (or even but scrophulous,

or venereal, &c.) appearing in the *Eye* as that of an *Ophthalmia*, then be sure send for the *Oculist*. Thus I have been surprized to observe, some of our noted Physicians having attended a Rheumatick, &c. Case, and the Patient recovering of such *Ailment*, some part, however, of the Humour has shifted to the *Eye*, occasioning a *violent Ophthalmia*, endangering those Parts, have then cry'd, (possibly finding a little difficulty.) Have Patience, Sir, *it will go off*. Is this then a way of talking for Men of *Knowledge*? Yes, said I, *so it will*, or you'll be *blind*. And so would your other *Maladie* also have gone off (of it self) or you would but have *died*, that's all: For, indeed, all or most *we do*, that I know, is but with *greater Safety* or a little sooner to help off a *Maladie*.

And now I shall take notice, that as to writing in the way of Professions, particularly in this of *human Maladies*, it can only most properly be judg'd of, by those of the Profession; which Writings are but too commonly represented, by the *pretending* (perhaps, sometimes, even by the more learned *Scioli*) with an *invidious Eye*, and if *bad*, such unlucky Performances are then, no doubt, for *ever damn'd*. As to such who have writ, they, indeed, are *entitled to speak freely their Sentiments* of a *Brother-Writer*, being they, as well as he, must stand the usual and common *Fate*, of being *baited* or *shot at* as *common Marks*. Now, he who takes his *Turn*, thus to stand, another has some *Chance* to hit him in *his Turn*, and thus to do himself *Justice*: But it is the *private, lurking, pickerooning Murderers*, who dare not openly *appear*, who are the most *dangerous* and *hurtful*; and tho' such were to be *muzzled* by the
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in relation to the EYE, in his Anatomy. 119

Legislative Power, yet even then, *a Shrug* of the Shoulder, or no *Answer* (when ask'd) would still readily wound as much, if not more, than plain Words, which may often and properly be replied to, by such who *have ask'd* their Opinion of an Author.





S O M E
N O T E S
O N

Dr. P. SHAW'S *Maladies of the EYE*,
IN HIS
Practice of P H Y S I C K.

HAVING had the Curiosity, or rather by Accident, looking into Dr. P. Shaw's new *Practice of Physick*, more particularly into that part relating to the *Eye*, to see what might be there observed, either *new* or useful, in that way ; I own, that I was not a little *surprized* to find a *Person* to undertake such an *Affair*, with so little *Foundation* of this kind : Neither had I, indeed, Patience enough, or Inclination to peruse the rest, after that, which I observed on *this* Part. To attempt, or pretend to instruct Mankind, when so very *deficient*, so little knowing in such like Matters, (thus leading them into *Error only*, so to do more *Mischief* than good) is greatly *amazing*. If he acquired no better Knowledge of such Affairs in *his* *Studies*, or *Practice*, ought he not, at least, to have consulted the *best Authors* on such Subjects?
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If *Boerhaave* and *Sydenham* were his chief Instructors, who were surely *weak* in this way, at least the former *Professor* (he studied under) could have instructed him in the Books, proper to be consulted on *this Head*; his Book appearing to me, to be formed on a very indifferent kind of *Model*, whosoe'er it is he has used for *that purpose*.

But I am sensible, it is advanced by his Friends, in his Behalf, that it is several years since it was writ, and that this of the *Præfice*, is the very worst of all his *Performances*, &c. I hope, indeed, it is *the worst*, and that his others, are far better, (since, I think truly, they had need to be so;) but the former Excuse of their being long time since they were writ, seems to be of *no Validity*, being we have a *new Edition* thereof but very lately *publish'd*, with little or no Amendment. Whereas an *Author* is, no doubt, still accountable to the *Publick*, for his *Performances*; more especially when they appear in *reiterated Editions*; since they ought there, no doubt, to be amended by the *Author*, if capable, or by *Supplement*, &c. I shall here then produce only, a short Specimen of the *Oddities*, contain'd in this Part I have look'd into, which may serve to prove to him, how much that Performance requires to be *re-modelled*, or, at least, *revis'd*. Since to enter narrowly, so to examine even this Part, (far less the Whole) would require too much time; for which Reason I must beg to be excus'd *that Labour*. In the mean time, if this should any way serve *our Author*, as somewhat of a *Model* to examine the rest by, I am satisfy'd.

Our Author then, begins the Diseases of the *Eye* with the *Ophthalmia*; I shall not trouble the Reader with his Definition, or his Signs thereof; but in short observe, that his principal Advice and *Præfice*, (but too common with the Generality

lity of the Profession) is to use all the *Evacuations of the Body* which are known (a Knowledge easily, and very soon attain'd to:) And then as for the rest of the Maladies of the *Eye* our Author treats of, he, in general, refers you to the Cure as in *Ophthalmia*: So that the principal, if not the Whole, in all Cases, seems to turn upon what *Moliere* observes, *Clysterium donare, ensuite signer, postea purgare, & encor, & ancora signer, purgare, vesicare, &c.* This might, perhaps, be sufficient on *this Subject*; however, since we have begun, I will yet for the further Satisfaction of our Reader go on a little further.

In *Albugo, & Pterygium*, page 40, our Author says, in this, *Proceed as in Suffusion*; and in this last (as has been observed) he refers you to proceed as in *Ophthalmia*. After this, in the next Page, in his Definition of *Suffusion* and *Cataract*, he says, *a Suffusion is a thick Foulness, or Excrecence of the Tunica Cornea, adnata, or aqueous Humour, which when confirm'd makes the Cataract*. How! quoth he? of the *Tunica Cornea, adnata, or aqueous Humour, which when confirm'd makes the Cataract*. This is altogether a new Doctrine, I frankly own, and that I am quite at a loss to comprehend. *A thick Foulness or Excrecence of the Cornea, adnata, &c. the Cataract!* This surely requires our Author's more full Explanation, with a Witness. After this, he is pleas'd to observe to us, that a *Suffusion seldom affects both Eyes; or, if both, not together, or in the same manner*. Ay indeed! I pray who informs him of all this? I would advise him never to credit such another time. Well, but then he likewise acquaints us, that the *Suffusion or Cataract extending sometimes*, says he, *over or between the Cornea, and adnata*. A very notable new-fashion'd *Cataract* truly, which no Man, I dare say, has ever heard of before. This extraordinary

ry Piece of Information, I doubt not, he may have had from the same Hand with the former ; but I wish he'd be advis'd never to believe 'em more. *Old People*, says our Author, *are not to be couch'd*. A sad Man, who *thus imposes* on this good *honest Writer*. Now, as to *Children*, he is there also pleas'd to *speak of*, I wish he had mention'd to what *Age* we are still to understand them as such ; *not to be couch'd* ? He gives us various Prescriptions in such like Cases, (of *Suffusion* and *Cataract*) and in particular (after the Method as in *Ophthalmia*) he advises as very serviceable the *corrosive Sublimate per se* ; but 'tis more *expeditious*, says *this Practitioner*, *To touch the Part frequently with Vitriol. Roman. or even with the Causticum Lunare*. Here I cannot forbear sending our Author's Correspondent or *Instructor*, to the D——l to practise upon. In *Gutta Serena* he recommends the Method likewise used as in *Ophthalmia* ; but if such Measures, he there lays down, prove *ineffectual*, he lastly advises the use of a *Salivation*. This in *Atrophia*, which he here seems to allow, or when there is the least Tendency to *Paralytick Disorder*, the common *Calamity* in those Cases, is consequently a *Practice* only fit for the foresaid *Gentleman*. *Vid. my Ophthalmographia* on this Head.

The Disorders of the *vitreous Humour*, he refers, as the former, to *Ophthalmia* and *Gutta Serena* : And this latter, is again referr'd to the former, that is to *Ophthalmia* ; and as for the *Maladies* of the *CrySTALLINE*, which he terms the *Glaucoma*, he as yet refers you to *Gutta serena* and *Ophthalmia*. *Myopia* is, for its Cure, likewise referr'd to *Ophthalmia*. The Cure of *Mydriasis* is also, according to him, to be treated as *Suffusion* or *Ophthalmia*, in page 51. Here our Author's Instruction seems to be as bad in supposing the *aqueous Hu-*
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mour or *Extravasation*, as he terms it, *only soon to be recruited in (Infants) or Infancy.*

I must likewise give this Writer over, as before, in his *Salivation* for the *Cancerous Ulcer*, in *Hypopyon*. As to the *Pblyctane*, these small *Pustles*, their being *less dangerous in the Cornea than in the Adnata*, as he tells us : this is also a Doctrine I do not understand. The Cure, he next acquaints us, *is entirely the same with that of Hypopyon*, a great Novelty also : But in the same Page, he informs us, *if the Ulcer is in the Cornea,—— it is harder to cure, than in the Adnata ; and that the Cure is the same as that of the Hypopyon.* He observes in the same Page, and says, *That a Solution of Continuity happening in the Cornea, lets out the aqueous Humour upon the Uvea.* This also wants a little further *Eclarcissement*, for the good of Mankind : And thus far, as to our present Author; this, I hope, being sufficient for a Specimen in this way. How much more knowing others may be, who have not thus appear'd *in Print*, is what I shall not pretend to decide : But 'tis certain, that there are very few of the Profession who refuse to *undertake* or to *dabble* in these Affairs, tho' they know nothing at all of the matter ; yet they, 'tis likely, may be endu'd with a Sufficiency of Assurance, Pretence and technical Terms, in this way ; so to make the Ignorant to credit they know something. How many Blunders of this kind are there not committed, even by some much reputed, &c? For example, What shall we say (as hinted at in our former) of such a stupid Practice, (used by *Physicians, Surgeons, &c.*) as that of the Powder of *Glass*, for the taking off *Films, Specks or Excreescences* from the *Cornea*? Might not *Surgeons* just as well use ground *Glass*, or Sand for the taking off *Excreescences*, or proud *Flesh* from other Parts of

of the Body, inflamed or sore? especially if well rubb'd with a Stick; which, I doubt not, soon to hear of being practis'd for the Eyes, by such great Improvers of Practice: But before I as yet leave those so reputed as Regular Practitioners, I cannot omit the taking Notice of one in great Practice and Reputation, remarkable enough for brushing into sore and tender Eyes, with a heavy Hand, a greasy old female Liniment. Yet this is nevertheless to be kept as a wonderful Secret, (by this regular Practitioner) from all the *Scioli* of the present Age: Nor has it ever been discovered to the R. S. even among all the great Discoveries which have been made them by the learned World these forty Years; but it may, perhaps, be discovered to them by way of Legacy. In the mean time they may use Oil and Lapis Calaminaris, with Minium; which will do as well, (probably the same) or the Ointment of Tutia, which is, in my Opinion, far better, having had the Experience of both. Thus Nature will often recover Eyes and other Ailments, even with the use of meer Trifles, or nothing. Nay, not only get the better of a heavy Hand, but even of Bear-Garden Fifty-cuffs also. And now, can any one at the head of the Profession, or of the C—— of P—— pretend, during Life, to make a mighty Secret of such ridiculous Trifles, (used on most occasions in this way) this notable Receipt, borrow'd from some honest doctoring Female: And is this then what all our great Learning comes to? or that of the R. S. or C—— of P——: And is any one as yet at the head of any Profession, to make and to use such, or any Nostrums? Or, does even the Profession, as yet, countenance such like Proceedings? Yes, truly, so it seems; nay, even the Pharmaceutic Tribe likewise, whether from Blessings or Gettings;—— and

and thus the *World goes on*. I have before observed how *idly and simply* many of the *Regulars* of the *Profession* have followed that pretending noisy *Oculist T——r*, without the least *Rhime or Reason*, attending to his most *nonsensical*, impudent Pretensions, thus fairly confessing their *little Skill, Learning or Knowledge*, in these Matters: And will it not seem still more strange, if *professed Oculists* as *B——*, &c. who have even *serv'd or learn'd* of a very greatly pretending *Cb——n* in these Affairs, who in *France* also pretended (as *T——r* did) to write in this way, tho' endu'd, indeed, with some School-Learning more than the former; yet, in reality, the Performance not one *bit better*, being only a Parcel of downright Quack Bills of his Cures, which he there hurstled together, without the least Use or Instruction to the *Publick*, supposing his Relations to have been *Fact*. His Eleve then, I say, sufficiently prov'd how much he knew of this Matter, in running after such as *T——r* to learn of him. The good Woman in *New-street*, and that in the City, &c. shew'd themselves *wiser*, and more knowing, than to attend any such; which good *Female*, I say, can *thrust in a Needle*, or *depress a Cataract*, even as well as they can. Thus, indeed, it is, that some such, who know in reality, very little more than to *thrust in a Needle*, and (for better or worse) to beat down a *Cataract*, or a little further pretending to some *Eye-water*, or *Salve*, they are thus straight consider'd by the *unthinking Multitude*, to be *truly knowing*, and greatly fit to cure all *Maladies* of this *Organ*; and so are employ'd by such accordingly, as their *Oculist*, &c. (until they have paid for their *Experience*.) There are few who consider, what this Knowledge or Study truly

truly is ; nor do they know that a Person of common Capacity may be brought to perform this Operation in *five Minutes time*, by one who can *couch* : But, indeed, the great Secret in this Affair, is, the true Knowledge, *when* and *which*, are the most proper to be *couch'd*, and which those that are not to be *tamper'd with*? an Affair, few or none of all these pretending People, are any way acquainted with. But Mankind must e'en go on to *venture*, and *risk* their *Eyes* as usual ; or as they shall think fit, it being certain they most commonly like those the best, who *know least* ; and are consequently, those who promise the most : It is also certain, that such like pretending People, are commonly ready and busy, still to be doing ; and thus rather doing Mischief, than to do nothing.

In fine, it seems almost full time I should finish these Considerations, and thus now leave the *Reader* to observe the *Advancements* which have been made in this way, by our present, or any of our *fore said Authors I have mention'd*. I cannot, however, but at the same time own, that Dr. *Porterfield* seems to have been the *most painful*, in his *speculative Attempts*, (reading and compiling from the most noted Anatomists and Authors) to advance somewhat *new* ; yet it appears not to me, to have answer'd the true and *useful Intention*. In a word, if upon the Whole that I have writ, what has been said, be all the *Virtuosity* or real *Knowledge* produc'd in this way, methinks such might even as well employ themselves, and shew that they are knowing *Virtuosi*, or greater *Connoisseurs* in some one, or any other way : And if I may have acquir'd any such *Name* in any other way, (tho' possibly not well deserving it) I must nevertheless frankly own, I do not, nor can I

I promise to remain, entirely *confin'd* from the Desire of Knowledge in other ways, or sometimes that of other more private Amusements, productive of Knowledge, &c. tho' it may at the same time be observed by this, whether I have *forgot*, or that I am ignorant of the *present Subject*.



SOME



SOME FEW
THOUGHTS
ON

Dr. J. JURIN's ESSAY

UPON

Distinct and Indistinct *Vision*,

Contain'd in

Dr. *Smith's* System of Opticks.

UPON the Appearance of two Pieces which came out (after my foresaid Discourses were in the Press,) to wit, that of the Physician, the other of the Surgeon of the same Hospital; which last acquaints us with the great Improvements made with them, &c. I begun to be in some doubt, whether what I had before said, in relation to the inconsiderable Improvements which have been made, might not be necessary to be recall'd; or, that I ought to make some *Apology* for the same. But on looking into these Authors I concluded, that I might even let all stand, thus maintain my Ground, and still go on with the same Assertion as before: However, it may not be amiss, for the further Satisfaction of my Reader, I take some notice

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tice hereof, tho' in a cursory Manner, both on account of my deficiency in Time, as well as, that, to me, it seems to be all is necessary.

This learned Person, Dr. *Jurin*, seems to have been at a great deal of pains to instruct the World in the speculative Part of the Eye, the *Theory of Vision*. We are indeed oblig'd to him for his *strenuous Endeavours*, and wish it would answer the Author's Intention, the *Good of Mankind*, and that of *his own*. I was indeed in hopes that this knowing Gentleman, as being, or having lately * been Physician to an *Hospital*, would rather have oblig'd us with *practical Observations*, than to amuse Mankind with such very speculative Subjects, as this of variously ranging of the *Rays of Light upon the Retina*; and which, I think, he acquaints us also, he is greatly, or principally indebted for, to Dr. *Smith*, in his Letter to him. Now, this Subject, I say, having already been so thoroughly handled by *Newton*, *de la Hire*, and *Marriot*, as well as most of the *Opticians*, &c. it seems therefore less necessary than that (as observed) of the practical Part; and so for our Author thus rather to have left these speculative Thoughts, (if not already sufficient on that Head) which at best are but Opinions (too often very uncertain) to have been more finish'd, or labour'd, by such who make it their particular Study, and have all their Time to spend in *deep Speculation*.

There appears a Book lately published upon *Colours*, (by one *Place*) who denies all manner of Rays of Light, &c. He seems, indeed, to be a very odd, and a quite out of the common way Author, (few, possibly, will, after slightly viewing him, have the Patience to read him out;) yet I freely own I have read him over, and tho', no doubt,

* Or lately, or some time was so.

doubt, extremely extravagant in his Way, and out of the common Road ; yet I must at the same time own, that there are, I think, some Thoughts in him which still deserve notice ; nay, even to deserve an Answer. For my own part, I have hitherto also said, and gone on in such speculative Subjects, according to the modern establish'd Opinions ; yet I cannot but at the same time own, that there are still several Difficulties appear to me not to be well resolved, even in our very best Theory of *this Subject* ; and 'tis well, if the best of these Opinions, not yet so very fully confirm'd by unquestionable Facts, be not still liable to change, as others have been before, from the Beginning of the *World* to the *present Time* ; and as they probably will be so to the very *End thereof*.

But it is not unlikely, that our present learned and ingenious Author Dr. *Jurin*, may be apt to advance, in relation to the being at so much Pains, in exactly ranging of the Rays of Light or Objects upon the Retina, that this was necessary and principally intended as Introductory, thus illustrating and more fully proving what he thereafter advances, as to the Necessity and Power of *altering the Conformation or Figure of some particular Parts of the Eye*, in order to see more *distinctly at different Distances*. We shall not then call in question how very absolutely necessary all that Discourse there laid down might be, even in that Case (before the certain Proof of what was so requisite for that purpose ;) but we shall now rather choose more particularly to examine how our present *Author succeeds* in this last ; more especially, as to those principal Parts he speaks of suffering such Alteration, to wit, the *Cornea*, *Ligamentum Ciliare* and *Crystalline*.

In the first place then, I am not a little surpriz'd at this so learn'd Gentleman's Account of these Parts, as if quite deficient in having read or convers'd with the best esteemed Anatomists on this Subject. Our Author, in describing the *Uvea*, is pleased to tell us, *That meeting with no Satisfaction in any of the Hypotheses above related, I applied my self to a diligent Consideration of the Parts of the Eye.*——Very well. *The Uvea* (says our Author) *is a muscular Membrane, and as such is capable of contracting it self into less Dimensions. It arises from a circular Ridge or Protuberance running all along the inside of the Cornea, at its Juncture with the Sclerotica, which Ridge I do not remember to have seen hitherto taken notice of by any Anatomist.* I know not, I say, who it is this learned Author has either examin'd or convers'd with on this Head ; but my Words, in describing that Part twenty five Years ago, in my *Ophthalmographia*, run thus, page 14. *The Ligamentum Ciliare arises from a little circular Process or Coronet, which makes a Partition to the Choroides and Uvea ; it likewise adheres with its Circle, where the opaque Sclerotica and transparent Cornea meet ; from hence it forms a delicate Membrane, which runs upon the outside of the Glassy Humour, or from the Circumference to the Centre ; that is, from this Coronet to the CrySTALLINE.* These then are my Words, even at that time of day ; and yet then, so far from my pretending that such *Ridge, Protuberance, Process or Coronet* had not been before discovered, or taken notice of by any Anatomist, that I hardly then knew, or do I now of any of the Moderns, especially those worth reading, who do not mention and particularly describe it ; nay, I question whether it be not even taken notice of and described by some of the Ancients, which I cannot think they could well miss : But it seems not greatly material and

and necessary the turning over many Books, in order to quote how many have taken any notice thereof, since I think it is fully sufficient for me, that I have clearly mention'd it, and distinctly *described it*. Now, Would then the Dr. willingly have imagined himself to have been the first Discoverer hereof? Or, would he, that the World had been so good as to have taken it so? Let us next then a little examine, how very just and knowing this accurate Author is, after his *diligent Consideration of the Parts*, in the describing, and the Situation of them.

In speaking of the *Uvea*, he says, *it arises from a circular Ridge or Protuberance running all along the inside of the Cornea, at its Juncture with the Sclerotica*. The knowing Reader will here be able to observe how our Author *strains this Point* in Situation, ingeniously to make it the better suit his own Purpose: And therefore, I must, and do absolutely *deny this Account* of his; neither do I believe that he can bring any tolerable Authority for his so saying; or, indeed, it seems evident to me from this Description, that this learned Person has never discovered it either first, or last; or if he has seen it, and, as he says, *diligently consider'd it*, he must, as I have said, incline much to make it serve *his Scheme* and Purpose; without which the whole *Fabrick thereof is undone*. My Words then, are as before mentioned, page 14, *it adheres with its Circle where the opaque Sclerotica, and transparent Cornea meet*: But now it seems necessary I should explain my self as yet more distinctly, and fully, on this Head; more especially since our learned Author seems to lay great Strefs upon this Assertion according to him. I do now then positively *assert and affirm*, in direct Opposition to his Account, that this *Ridge, Coronet or Partition to the Choroides and Uvea is adherent only, and pro-*

perly upon the opaque Membrane Sclerotica, and not on the transparent Cornea; it being, if I may be allow'd the Freedom of the Expression, the *Partition-Wall*, the Termination of this opaque Tunic, and only properly adherent, arising, or built on the Extremity thereof; and altho' 'tis true, that the transparent Cornea do immediately join thereto, yet it is not placed thereon, which, if it were, such part must necessarily thereby be render'd opaque, and consequently become a part of the Sclerotis. I might illustrate this with Authorities from Authors likewise, were that necessary, as to the particular Insertion hereof, did I not my self sufficiently know it to be so, as well as from the very Reason of the Thing: And this then proving to be an *undoubted Truth*, the whole *Hypothesis* of this learn'd Person, as has been said, must necessarily fall, as we shall observe more particularly hereafter; and yet, I must at the same time remark, that this of the placing such *Ridge or Protuberance* on the transparent Cornea, is, I dare answer for it, what has not before been *seen, or hitherto taken notice of by any Anatomist* *.

The next Contrivance, or subtile Piece of *Machinery*, this ingenious Author is pleas'd to invent for us, is to turn this *Ridge* into a *Muscle*, by whose Rope or Pully he may accordingly move his *Machine* at pleasure. Now, in answer to the inquisitive Question of the Curious, How this is prov'd to be a *Muscle*? The Reply is ‡, *That the Uvea is furnish'd with a narrow Ring of circular muscular Fibres*

* Dr. Nichols seems indeed somewhat inclinable to favour our present Author's Opinion, in relation to his Description or Account of this Particular; to wit, that there seems to be a Limb, or Edge of the Cornea, which lines the inner Edge of the Sclerotica. Yet alas! even admitting this, we shall be ne'er a Hair the nearer than before, by this Tunic being so lin'd; rather worse, the said Sclerotis still remaining, and consequently still the same Difficulties also, as we observe hereafter.

‡ Page 138, Article 129.

bres on the Edge next the Pupil: That is, he allows it to be *suspected* or *imagin'd* only, *not prov'd*. So by the like Rule, the Doctor supposes his Ridge to be a *Muscle* also. I shall therefore, says he, make no scruple of *qualifying this Limb of the Uvea next the Cornea, by the Name of the greater muscular Ring of the Uvea.* — It will, perhaps, be objected to me, continues he, that the *Existence of this supposed greater muscular Ring has not yet been proved by ocular Demonstration.* I answer, neither has the *Existence of the lesser Ring* been yet proved in the same manner. Extremely well, truly: And, now, by the same Rule of the *Invisibles*, or the *meerly Imaginaries*, I should likewise suppose (to serve my Purpose) as yet a third or middle Ring, betwixt these two; What Rule is there, Reason or Proof, that it is not to be allowed, as well as that of our Author? Or, supposing I was to deny all of them, and to allow none such as either, How then? And yet, I must again observe to him, that there is no manner of *Comparison* to be made, betwixt that of *his*, and that of the *inner or lesser Border of the Uvea*, as he is pleased to term it; since it is visible by *ocular Demonstration*, that this same *inner Edge or Border of the Uvea or Iris* is *apparently contracted or dilated*, whether as being a proper or *distinct Muscle* of it self, or only, as a part of the *Uvea*; which last, does not appear the least probable. Thus, then, it is plain, that our learned Author has no such *Visibility* or *Demonstration* on his side, but entirely *Supposition and Imagination*: But the Doctor by way of some Answer to this, would seem there to advance, That the *Change of Conformation in adapting the Eye to near Objects, is not less demonstrable*: But without dwelling here, we shall at present proceed. Page 139, Article 130. *The Crystalline Humour is contain'd*

tain'd (says our Author) in a very fine membranous Capsula, with a Water between them, after the manner of the Heart in the Pericardium. This, I take (continues he) from the Observation of the late Anatomist, particularly, the famous Mons. Petit*. But this alas! was observed by me in my *Ophthalmographia*, at least seventeen Years before this Author writ his said *Memoire*. My Words are, page 20,—its Coat, I think, being something to it, not much unlike the Pericardium.—Well, but the Doctor probably was more willing to be obliged to a Foreigner for it, than to any one on the Spot†. But now since he follows Petit, and that Petit says it but seventeen Years after me, I will now unsay it again; that it is not like or after the manner of the Heart in the Pericardium; nay, that it scarce has any Similitude thereto; since the latter is not only pierced in five different Places, (which the other is not any where) for the Passage of the great Vessels to the Heart, which sustain the same, as also that of its being tied to the Mediastinum and Pericardium, as well as Difference of Shape of one and t'other; and that the Water contain'd in the Pericardium, is only towards the Bottom thereof; whereas that in the *Aranea* or Capsula of the Crystal-line is equally round that Humour; neither is this said Body any way adherent to this its Capsula or Membrane. The Doctor in the same place goes on thus, *From whom* (to wit Petit) *I must likewise observe* ||, *That*

* *Memoires de l' Acad. Royale*, 1730. || *ibid.* p. 436.

† This, with the Paragraph before mentioned (of the Ridge or Coronet) 17 Years printed before that of Mons. Petit, and so quoted from abroad by our Author, (from him) would, I doubt, appear to some, as shewing somewhat of a Tendency, or Inclination, to the much approved Doctrine of sinking of Authors, who are on the Spot; excepting where there may be some mutual Inclination to the tickling of one and t'other.

That the back Part of this Capsula, or that Part which invests the hinder Surface of the Crystalline Humour, adheres to the Membrane enclosing the vitreous Humour.—My Words then, at the same time, in the foresaid Treatise, are these, page 18, speaking of the *vitreous Humour*.——*It is certain, that its Membrane or Coat is not only continued or adherent to the Ligamentum Ciliare, but likewise to the Tunica Aranea.*——A little further,——*This Membrane (Aranea) adheres to, or is continued from the vitreous Tunic and Ligamentum Ciliare:*——And again, page 19, *its Tunica Aranea, being continued from the vitreous Tunic, and the Ligamentum Ciliare.* As to the Doctor's describing the Crystalline, which he also takes from the same diligent and accurate Anatomist, its being two Segments of unequal Spheres clapt together on their plane Sides,——I say page 18,——*it is convex on both Sides; its Backside towards the vitreous, is much more convex than the other;* which last Distinction, I know not that our Author, or his Leader do make. Article 131. *The Ligamentum Ciliare is a Muscle,* (says our Author) which, however, before such positive Assertion, it had not been quite, methinks, improper to have proved it so to be, for the further Satisfaction of his Reader, or such who may oppose that Opinion.

This same Section he goes on in describing the said Ligament; *It arises close behind the Uvea, from the abovementioned circular Ridge at the Junction of the Cornea and Sclerotica, and running over the outter Edge of the vitreous Humour, is inserted all round the anterior Surface of the Capsula, upon which, says Monsieur Petit, this Ligament prolongs its Fibres.*——My Words, page 14, in the foresaid Treatise, run thus, *The Ligamentum Ciliare arises from a little circular Process or Coronet, which makes a Partition to the Choroïdes and Uvea; it like-*

likewise adheres with its Circle where the opaque Sclerotica and transparent Cornea meet ; from hence it forms a delicate Membrane, which runs upon the outside of the glassy Humour, or from the Circumference to the Centre ; that is, from this Coronet to the Crystalline.

But now we have pretty well nam'd our Tools, or got our Machinery into some sort of Order, it seems almost time, we should next begin to set them to work ; tho' I must beg my Reader's Pardon, if, for want of time, as well as shunning a tedious Account, I only use so much, in general, as serves the present Purpose, thus shewing the Invalidity of the whole thereby, and so refer (to such as incline it) the further Perusal of the rest to his own Account. His Words are, *Art. 133, 134.*

“ When we view Objects nearer than the Distance
 “ of fifteen or sixteen Inches, I suppose the greater
 “ muscular Ring of the Uvea contracts, and
 “ thereby reduces the Cornea to a greater Convexity ; and when we cease to view these near
 “ Objects, this muscular Ring ceases to act, and
 “ the Cornea, by its Spring, returns to its usual
 “ Convexity. ——— When the Eye is to be suited
 “ to greater Distances than fifteen or sixteen
 “ Inches, I suppose the Ligamentum Ciliare to
 “ contract its Longitudinal Fibres, and by that
 “ means to draw the Part of the anterior Surface
 “ of the Capsula, into which these Fibres are inserted, a little forwards and outwards ; and at the
 “ same time this is done, the Water within the
 “ Capsula must necessarily flow from under the middle, towards the elevated part of the Capsula, and
 “ and the aqueous Humour must flow from above the elevated part of the Capsula to the middle ;
 “ consequently, the middle part of the anterior
 “ Surface of the Capsula, must a little sink, while
 “ the

“ the other is elevated, or the whole anterior Surface, within the Insertion of the Ligamentum Ciliare, must be reduc’d to a less Convexity.” From hence it may be observable, that this ingenious Gentleman makes not only the *Ligamentum Ciliare* a *Muscle*, according to Dr. Porterfield, but he still gives a much greater Power and Use to it, in also depressing the Crystalline, by means of its Capsula, &c. which, if we are not to suppose sufficient of it self, yet, at least, is so reduced by the Water therein contain’d, on the Contraction or Motion of the said Ligamentum Ciliare, with the aqueous Humour from above as before mention’d. Thus the Opinions of the *flattening* of the *Crystalline*, with that of the *muscular Motion* of the *Ligamentum Ciliare*, are both join’d here, as well as that occasionally of the Cornea, for the proving more fully, *Distinct and Indistinct Vision at different Distances*. I think there is hardly any occasion for my taking farther notice of the two first, *to wit*, that of the *muscular Motion* of the *Ligamentum Ciliare*, than that I have already mention’d in depressing of the *Cataract*, in the Discourse relating to Dr. Porterfield’s *Motions* of the *Eye*; that of the *Alteration of Form*, or the *flattening* of the *Crystalline*, by the *same* *foresaid Rules and Reasonings*, likewise falling in course. Now, as to the *contracting* of the *Extremity*, or Edge of the *Cornea*, so as to render this *Tunic* (occasionally) more *convex*, we have observed, that the Doctor has judg’d proper to turn the *Ridge or Protuberance* before spoken of, into a *Muscle*, to support his *Hypothesis* the better; and so to *term it* by the *Name* of the *greater muscular Ring of the Uvea*. But then I must observe to this very learned and ingenious Person, that I differ greatly with him in the *Anatomy, Situation, or Insertion* of these Parts, (as has been hinted) and of this Ridge in par-

particular, which he is pleased to place on the *transparent Cornea*; whereas I place it on the *Sclerotica*, and that of the *Ligamentum Ciliare* still more so, as lying rather more backward, which he, however, also places as the former, on the *Cornea*. Now, if so, as I affirm it to be, (which must be referred to the most accurate Writers in Anatomy, or to the Examination and Inspection of the best Anatomists) if the Thing do not prove it self, from Reasons before mention'd; in such Case, I say, supposing this my Assertion to be Fact, the *Cornea* cannot then be *drawn in and contracted*, or rendered any way more *convex*, as mentioned by our said Author, unless he advances, that even admitting it to be as I have said, inserted on the *Sclerotica*; yet still supposing it that way, by the *Edge* of this said *Tunic* giving way, so the *Cornea* immediately joining thereto, would also thereby be rendered more *convex*: But then I would oppose the great *Rigidity* of that *Tunic* sometimes happening, (as observed by him) or as yet I would suppose the entire *Offification* of such *Circle*, if not of that whole *Tunic*, as observable in some *Animals*: This, I say, will consequently destroy this System entirely, and all this very learned Author's *mathematical* Reasonings, and various *Calculations* thereon, will fall in course. We might probably be able to bring further Difficulties, as to the *Thickness* of the *Cornea* in some *Animals*, as well as its making a greater part of a *Sphere*, &c. but I imagine I have here already said sufficient, on the Improvements here made, more especially since were more necessary, I am call'd upon to have done.

As to the Opinion this same learned Person gives us of Dr. *Pemberton*, to wit, "That to suit the Eye to the nearest Objects, one Surface of the Crystalline is to be rendered more convex, while

“ while the other grows flatter ; ——— and such
 “ Alteration is supposed to be made by certain
 “ muscular Fibres within the Substance of the
 “ Crystalline : But this Sentiment, (continues Dr.
 “ *Jurin*) has not been so fully explain’d, by the
 “ learn’d Author, as we could wish.” I thought,
 indeed, to have taken some further notice of the
 Invalidity of this Opinion also : But upon a se-
 cond time accidentally looking into Dr. *Porter-*
field’s Discourse*, which at first reading, probably,
 I had not so much attended to ; I there, however,
 found, on this second Perusal, that the said inge-
 nious Dr. *Porterfield* had very fully answered that
 Opinion, tho’ he, at the same Time, mentions not
 the *Author* or *Authors* thereof ; yet whether Dr.
Pemberton supposes the Body of the *Crystalline* to
 be *adherent* to its *Capsula* or *Tunica Aranea*, (as as-
 serted by some) is what we (as well as, probably,
 Dr. *Porterfield* also) are unacquainted with ; and
 if so, *How and in what manner he proves such Ad-*
herence ? All which would seem necessary to be
 known, to answer that Opinion most properly. Nay,
 it is even affirm’d, that Dr. *Jurin* likewise sup-
 poses such *Adherence* of *this Body* to its *Capsula* ;
 yet by his *flowing of the Water* therein forward
 and backward, one would imagine, he could not
 well suppose any great *Adhesion* ; or if any, he
 ought, indeed, plainly to have *told us so*, the bet-
 ter to *comprehend him*. However, be these Opi-
 nions as they will, in this respect, they must, I
 say, from the fore said *Observation of Cataracts*,
 consequently *vanish*.

N. B.

* In the Medical Essays.

N.B. Upon Information that there had some Enquiry been made of that ingenious and accurate Anatomist Dr. *Nicols*, concerning the foresaid *Coronet* of the *Uvea*, Whether *muscular*, &c? He acquainted me that he had not had Time to satisfy that Question; but that he imagin'd he had found out a *new Muscle* in the *Eye* of an *Ox*, under the *Tunica Conjunctiva*, adherent to the Edges of the *Sclerotica* and *Cornea*, which he invited me to see; and which I accordingly did, *dried*, tho' I have not yet properly examin'd it in the *more natural State*, without drying; it, however, appears to be much of the *muscular Kind*; and this would seem much better to have answered the foresaid Scheme of Dr. *Jurin*, and thus have serv'd to amuse Mankind a little more, tho', I think, not to any great purpose. Whilst then we were conversing on the Subject of *this Organ*, I acquainted Dr. *Nicols* with the * *Conduits* or *Aqueducts* I supposed in the *Ligamentum Ciliare*; upon which he inform'd me that this was the Opinion of † *Hovius*; to which I replied, that I had not read or consulted him on that Subject; and that it was my own proper Conjecture. Well, said he, but the World will with difficulty *credit this*, supposing that you either have, or ought to have read him; for which reason, said he, it will be proper to say something to the Publick on *that Head*. These Sheets being then, as I told him, already cast off, and the Press calling upon me to be expeditious, I shall then only at present say, that as to the Charge of not reading him, I very freely own, that when he first appear'd, I suspected strongly, that there was little or nothing in him but what was borrow'd from others, as *Ruysh*, &c. under whom

* In Dr. *Porterfield's* Discourse.

† *Tractatus de circuli humorum Motu in Oculis*

whom, I judge, he studied, as I had done pretty near the same time : and on turning his Book slightly over at the Bookseller's, it confirm'd me still more in my Opinion and Indifference as to more strictly perusing it, as well as that the *Cuts* appear'd not much promising ; especially in the human Way, being only from Brutes or from *Russb* ; or what could be supposed any way new in him, seem'd rather *Imagination* than *Demonstration* ; or indeed to be *truly discover'd*. Add to this, that I was at that time diverting my self with other Amusements, unless something had offered seemingly more inviting than this appeared to me to be. It may even, perhaps, seem *incredible* to some, I should not have look'd into Mr. *Chefelden's* second or later Editions, printed much longer time. Add to this, so far as I have now writ, I might judge I had no great occasion to examine many Books, as indeed I have not. In a word, I have since look'd a little more into *Hovius*, and do find no great *Satisfaction* in him. *Heister* in his particular Criticism publish'd on him, seems justly to accuse him of having taken most of what is worth notice in him, from *Russb*, *Nuckius*, &c. And I doubt that what may be pretended to be *his own*, will rather be found to be *Imagination* than *Demonstration*. The Certainty of the Nature of the *minute Vessels*, *Fibres*, or *Ramifications*, &c. discovered by the use of a *Microscope*, is not, I doubt, much to be depended on. But at best, at most, or at worst, What can be said ? But that I have only *supposed or imagined* a Thing, which he *pretends* to have proved, to wit, *aqueous Canals* in the *Ligamentum Ciliare* ; if so, it only more certainly confirms the principal Opinion I advance, which, whether good or bad, none, I think, can pretend to have said before me, that is, as to the Nature
of

of *Cataracts*; and to which the former is only *subservient*. Now, from what I had said many years before him, of the *Sinus* of *Rau*, which he alters in the *Name*, as he does many, or most of the *Parts* he takes from *Ruyss*, *Nuckius*, &c. as remark'd by *Heister*, I having, I say, taken notice of that, as well as several other things in my said *former Treatise*, there was, I think, sufficient for me, without any such help, to have made this *Conjecture*; which in the mean time, I only advance, as a *Conjecture*, as to which I am not now a bit better satisfy'd with his intended *Demonstrations*, than I was before I examin'd him.

The same Gentleman facetiously ask'd, and very justly observ'd to me, "What, *says he*, do you write Books for? Since, *continues he*, they are either good, or they are bad; if the latter, you only give your Enemies a greater Opportunity of tearing you to pieces; and if the former, you do but create thereby a greater number of fresh Enemies; nay, the better it is, the more Enemies you consequently make; that you make ten Enemies to one Friend; and that one Enemy injures you more than ten Friends do you good." So even the greatest Virtue it self is ever the most liable to this. These, I am very sensible, are but too *certain Truths* to be denied. Mankind, in general, being much too apt, *narrowly, interestedly* or *maliciously* to *imagine*, that what *Credit* they allow to their *Neighbour* (if not interested in him) is a *subtracting*, or a taking away so much *Reputation from themselves*. Thus, if there be any *Exception* from this so general and but too *certain Maxim*, it will be in extremely few *Cases*; as where the *Generality* are *highly diverted*, or somehow believe themselves to be *interested therein*. But in *Cases* where an Author seems any way to be attempting the *opposing of Error*, there, I believe, it will

will be found unquestionably true, that he will be loaded with a double Portion of this *unvariable Rule*. And now, this being the true State of the Case ; and that I must as undoubtedly be ranged with these last mentioned, it may readily enough be imagin'd, I should have consider'd this ; or at least, offer some Reason for my going on herewith. I can only now say then, that such Advice indeed was plainly given me *too late* ; since most of this *Book* was already *printed off*, and consequently not to be *recalled* ; being already in the Hands of the *Bookseller*. What shall, or can I then further offer in my own Behalf, unless it be this of the first *great Rule and Law of Nature*, to wit, that of *se defendendo*.

P. S. The most shrewd Money-getting Practitioners readily *laugh at*, and *warily* pretend to avoid the *Writing of Books*, in their own Way especially ; and so affect to *ridicule* and *despise* the writing of them in general ; particularly of some of those of the Profession, *upon the Spot with them*. I cannot but agree that such Practitioners, no doubt, reason the most securely as to *themselves* ; since, as some most justly observe, *there's much more got by the writing of Bills, than by the writing of Books*. Nevertheless, howsoever well these learned Gentlemen may reason as to their *own Particulars* ; yet it is, no doubt, e'en full as certainly true, that they are not like ever to *instruct*, *inform* or *improve* Mankind much in this Way ; neither seems it indeed to be the least of their *Thought, or Care*. And as to the present Benefit the World reaps from them, this must be left to them and their Friends to make the proper *Calculations* of that ; so to render Mankind sufficiently

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ciently sensible thereof. The real Knowledge of Practitioners is best, or almost only to be known, in difficult, *intricate*, or *complicated* Cases, principally to be discovered by those of superiour Knowledge in the Profession, when concern'd with them in Practice: And now I cannot omit adding, that had *Ratcliff* himself been *capable* and *willing*, to have left some *useful, improving Instructions in Writing*, in this way, for Mankind to have follow'd, for their further *Relief* and *Preservation*, he would thus, I say, have done infinitely *more Service to the World*, than by any *Uses* he put all his Fortune to, which he left behind him.

In fine, I cannot also omit observing, if my Reader imagines, (in this way) any more than in many others, that the Knack of attaining to a great Fortune (promoted by Friends or otherwise) and that of attaining to Knowledge, are inseparable, and in effect the same *Talents*, he may possibly, *sooner* or *later*, find himself *mistaken*. Neither seems it necessary to say much, concerning the Advancements made in this Profession, by such who have made the largest Fortunes therein.

And now I am thoroughly satisfied, that some of my Readers will be ready enough to *observe*, my being over-apt to speak too many *bold Truths*; I shall only then add, that I could have said many more, no way inferiour to these; and that he who inclines not, or dares not to speak any, may safely put all the good he is like to do in this World, *into his own Pocket*.

C O N T



CONCERNING
Mr. *SHARP*'s Book
ON THE
Operations of SURGERY,

Containing some

Explanatory Notes thereon, &c.

I Imagin'd it to have been hardly necessary, to take any notice of this junior Practitioner Mr. *Sharp*; more especially since he seems to be greatly in his Master *Cbeselden*'s way of Thinking, asserting much to the like purpose; and that he owes (as he observes) all his Knowledge to him the *Ornament* of the *Profession*. Now, conjecturing I might already have said enough of the *Master*, I concluded that might have been sufficient; but as this young Practitioner seems inclinable (as I understand) that I should take some notice of him, by his Enquiry, Why I do not mention him likewise, who has *writ so lately*, &c? I am thus now even inclinable to take some little *Cognizance* of him also, by the few following Hints, as a Specimen, if further should be worth *our* or the *pub-*

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lick Regard. I know not whether he has so far learn'd from his *Master*, as that Gentleman says, *he would as willingly that any one writ of him (or contrary to his Sentiments) as not.* I freely own, I in the mean time suspect, our present Author may judge that my mentioning him may possibly be of some use, by making him so much the more heard of, which is a principal Affair; thus rendering him some how considerable, by placing him with so much *good Company*, even with his own Master, &c. together with my Explanatory Notes or Hints of his Work: For to have taken no Notice of him, might probably have appear'd, or been *construed*, as an Inclination to the *sinking him*, as Authors *often do*, when they incline not such an Author in particular should *be heard of*. Now, whether he may naturally not prove over-weighty, so as able to *swim of himself*, is, what I will not absolutely pretend to determine; yet, be that as it will, I have resolv'd (according to his seeming Inclination) to assist him with the Benefit of a few of my *Plumes*, or *Feathers*, more certainly to help and contribute to his more effectual *swimming*; and thus to *coast it along*, so to render him more universally *known and seen*; the great and *advantageous Article in this World*.

Some, indeed, are of Opinion we should not trouble our selves to correct *Juniors*; or if we do, to use them very gently, according to their years; since it would be cruel, say they, to handle them *over-roughly*, with the *sinewy Paws of Experience and mature Knowledge*, I would therefore, rather choose to methodize him in a *paternal way*; and to use the Rod more *sparingly*, with a *parental Affection* towards him; because it is still to be hoped he may *mend*, and acknowledge his *Errors*, &c. Since there seems, as yet, to be
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some Hopes in his Face, he not appearing to be quite of the *abandon'd kind*. A little *friendly Correction* may therefore possibly be as yet of *use to him*, and do him *good*, by somewhat *humbling* too great a Share of *Vanity*, should that be *the Case*. Nay, if such will *over-forwardly enter the Lists*, with those of *Experience* and Years, without the least Ceremony or Caution, they must (from such) *expect their Play*. Yet it is well if this young Hero do not appear as a Champion for Men more in Years, perhaps, even besides his *Master*; for which last I do not so much blame him. It would probably appear hard to call in question his being the *sole Author* of that *notable Treatise*; and yet it would, methinks, seem no *less hard* or unreasonable, to suppose one of *his Years and Experience*, to be so very *rash, forward or indiscreet*, as to publish a whole Body or Work of this Kind (to teach and instruct all his Fraternity) without, at least, *consulting his Master* thereon (the Ornament) which I think there can be no reason to doubt of, from the Acceptance of the *Dedication*, as well as that of their very good Understanding, his Master, asking me also if I had seen it on its Publication, &c. So that it seems beyond doubt, to have been look'd over, and approved by him in particular, if not the very *original Design* taken from him, since this Author allows he *owes all to him*, &c. Neither appears it to be altogether improbable that some other of the *Scioli* of his Acquaintance, whether of *Hospital* or ———, might indulgently incline to encourage his Years, and thus *humanely to glance their learned and knowing Eyes over it*. This seems, indeed, to be in some Measure confirm'd by the *excellent Character and Recommendation they give thereof*, since its Appearance in publick. Thus it may not possibly be a

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very unreasonable *Query*, whether it may not, perhaps, be attacking a whole *Posse of Old Soldiers*, in *ambuscade*, in attempting to say any Thing of this junior Author; and were we to suppose these Matters to be otherwise, it might, perhaps, look too like a calling of his *common Sense too much in question*, in not having consulted *proper Persons*, no more *than Books*, on *such Occasion*; yet be that as it will, we intend to present the Reader with a *small Specimen hereof*: And tho' the Subject of the *Eye* be most proper for the Discourses before mentioned, yet we will say a Word or two further here. In fine, on some principal Parts of that Work, seemingly very necessary for a *junior Surgeon's Belief*; for which Reason we have judged it most requisite to throw it into

The junior Surgeon's *Tenets* or *Belief*,

B E I N G

A Foundation for improving the Second or Third Edition of Orthodox Operations in Surgery.

Imprimis, I do *sincerely and verily believe* that my *Master*, who makes *Interest* for me, and thereby gets me into an *Hospital*, is an "*Ornament*" to the * "*Profession*;" and that the rest of the World will be of the same Opinion.

2dly, I do likewise *believe and affirm*, (as in our Preface) "*That the Methods of operating in Surgery,*

* N.B. The Words or Sentences betwixt inverted Comma's, " are the same as in our Author. Those in *Italick* are more properly the Purport or Sense of our Author, than his strict Words. The Roman Character is most properly our Explanatory Notes on the whole.

“ *gery, have of late Years been exceedingly improved*
 “ *in England, and that there is no Treatise on that*
 “ *Subject written in our Language;*” and that “ *For-*
 “ *reigners lie under great Disadvantage, from their*
 “ *Ignorance of these Improvements;*” they being al-
 so, in “ *their manner of describing an Operation, so*
 “ *very minute, and in general so little pleasing;*”
 that we judge it no way necessary to except any
 one of them, whether *ancient or modern.*

3dly, We do also believe, that tho’ *Frere Jaque*
 by “ *Certificate of his Success at Versailles, where*
 “ *he cut thirty eight, without losing one;*” yet
 that all this is not so extraordinary and improv-
 ing, or so good a *Method* as *our’s*: tho’ we never
 pretended to have cut *above thirty* without any
one dying; and we are of Opinion, that we, and
 our *Master*, have succeeded equally in much a-
 bout the same Number; being agreed not to *cavil*
 about one or two, more or less: And thus it is
 we believe and prove *Foreigners* to learn of us,
 not we of them*.

4thly, *Introduct. page 3.* I do likewise believe,
 “ *that a Fungus, or proud Flesh, frequently esteemed*
 “ *an Evil,*” tho’, “ *in Truth,*” we consider it a
 necessary “ *constant Attendant to the healing of*
 “ *Wounds.*” And that dry Lint, or other dressing,
 seem not necessary, or to be *varied* as occasion
 may require: Nor that Wounds in a good Habit
 of Body will heal without Lint, or any thing else.
 6. We do further believe, “ *that no first dressing af-*
 “ *ter Accident or Operation should be applied in less*
 L 4 “ *than*

* And as we have observed, that the *Surgeons of the Hospitals*
 in Paris were probably unwilling to learn of one not regularly bred
 to the Profession; so, for the like Reason, why should we allow
 that we learn of a Foreigner or any else? Or, Why should not we
 have as great Capacity, (to reason in such manner) even, at least,
 as much as any Foreigners whatsoever?

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“*than three Days;*” without the least Regard to great Plenitude, Constitution, Place, Climate or Season. 10. And that “*Oil and Vinegar*” are best for all Inflammations as a Discutient, excepting to the Face “*only warm Milk.*” 11. And we do further believe, that when “*Suppuration has not kindly advanced;*” “*Bleeding has sometimes quickned exceedingly,*” which Nature would not have done so soon without it. 14. As also, That “*Theriac outwardly applied,*” “*and Cordials inwardly,*” is the best for the “*Cure of*” “*Gangrene.*” 25. And that “*Injection*” being of no use “*in Abscesses,*” so consequently it is of no Use in Gonorrhœa. And we do likewise affirm, that the *Virtues of Medicines cannot more enter the Pores, Sinus's, cut, or open Vessels, when warm, and so more Liquid, than when thick and cold,* yet in Winter we allow a little warming, possibly only for the sake of the Dossils lying more close to each other.

26. We do also believe, that “*Basilicon*” at all Times, and in all Parts of the Body, even in Legs and Feet, is the best Defensative over the dressing instead of Plaisters, as being better to keep on the Dressing, as well as the Skin soft, since they rather cause Inflammation; and as to Ointments in Wounds or Abscesses (it is to be observed) that they are only to be used when there is occasion, as others always did before us. 27. And we do further sincerely and truly believe *Air has not that ill Effect on Sores,* and that the open Air in the Country, and that of a Prison or an Hospital, tho' e'er so bad a Situation, as well as a Multitude of Patients, with malignant Maladies, in a great and populous City, is all the same; and that pestilential Air, Sinks, or Damps of Wells, Coal-pits or Mines, &c. so commonly remark'd, and said to have kill'd many People, is all false, and a meer vulgar Error; and we do assert that all such Air is much the same, and

and equally harmless, or is altogether as healthful as the free, open, clear, serene Country Air is on Cattle, to wit, that of a hail, rugged, and (altogether well accustom'd) unpamper'd Constitution*. 32. That *Basilicon* (as has been said) is equally good to Feet and Legs, as it is to other Parts; and that on necessary occasions we are only discretionally "to use Turpentine" *Aq. Calcis, Aq. Phagedænica, Tinct. Myrrhæ, Alum. Ust. Vitriol. Lun. Caustic. Lap. infernal. red Præcipitat. &c.* mix'd or dry, more or less to be used, as others have always done. 36. In *cancerous Ulcers* as "other" Surgeons likewise have experienced or discovered, who shall be nameless, being according to our approved Method of disliking and carefully avoiding to name Names, or to seem to be obliged to, or borrow, or steal from any one; it being our much approved Method of Writing, as if all our own, and that we learn from nobody, but our own Ornament, who surely never learn'd of any one. And thus we observe, (in such Case) that *the less tampering is the best*, and so we would use dry Lint; yet we find it sometimes beneficial to tamper a little as yet, with our dear *Basilicon, &c.* but a Word to the Wife is sufficient, "and the best way therefore is to be guided by the Patient what Medicines to continue.†" 38. Neither do we imagine that we can heal Ulcers too soon, by "lying much a-bed;" and possibly thus penning up too much, or too soon, a Superfluity of Humours, which may consequently load, destroy or oppress some

* And so far my Reader must surely allow, that such Observations must be of great use to Foreigners, when they come to know them.

† As to the Schirrous and Cancerous Cases, vide what has been said on that Head, in the end of the Discourse on Mr. Cheselden.

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some other more noble Part. 43. So, by way of Prevention, in Inflammations, or Mortifications "*bleed and clyster,*" as others both Foreign and *English* (without further notice) have done before us. 47. And for "*carious Bones,*" we do believe that the best thing is "*dry Lint*" or *Dossils dipt in Tincture of Myrrh*, as all others, whether Foreigners, or Countrymen, have still used before us. 48. We likewise "*in Burns*" do believe, our precious "*Basilicon*" to be greatly "*useful*" and that Mel Saponis or Honey with Soap, is not advisable, or at all to be used. Page 10. On "*Gastroraphy*" where the Omentum protrudes, to cut off so much as shall be mortified before you replace it, as all others who have pretended to any Knowledge in Surgery, (whether Foreigners or Countrymen) have ever practised, from the Beginning of the World to this present time. 18. So in "*Bubonocoele,*" or Rupture, plentiful Bleeding and Clysters repeated, one after another three or four times, being a Practice just found out by us, or some other Practitioners time out of mind before us, whose Names we have forgot *. 19. As well as our Method of Poulticing in such Cases. 22. Now, as to "*leaving some Part of a gangren'd Omentum,*" particularly without any Ligature, to interrupt or hinder the Communication to the sound Parts next thereto, we do verily believe it to be far "*the best Method*;" and that the rest of the Operation ought to be perform'd, as others have done † before us

* And thus you cannot but see, we teach all both at home and abroad, what they were greatly unacquainted with before.

† N.B. Being urged (as has been observed) from the Press, to have done, I had not Time to go on with these Notes methodically (had that otherwise been necessary) and so have taken the Liberty of touching only, on some particular Parts.

us. 70. So likewise to cut for the "*Fistula in Ano,*" as others have hitherto generally done; as well as that we, as they, occasionally judge proper, "*to use the Sponge-Tent where the Orifices are too small.*" We believe the "*Knife and Scissars the most bandy Instruments, almost all others that have been invented to facilitate the Work, are not only difficult to manage, but more painful to the Patient.*" And we do at the same time verily and sincerely believe, that an Instrument may be found to be of singular Use and Repute with the senior Surgeon of St. *Bartholomew's* Hospital, and of very great Effect for the cutting of incompleat *Fistula's* there; and yet be entirely useless at *Guy's*, St. *Thomas's*, and *Chelsea* Hospitals, or even possibly with the junior Surgeons of St. *Bartholomew's*, or with any body else. 93. I do also affirm and believe, that in relation to our Method of cutting for the Stone; that all Accounts of this Operation which are more full, or particular, than that given by us, is quite idle and useless; and that the Account given by Dr. *Douglas*, tho' more full, is minute, tedious and tiresome, being over-particular, &c. And tho' some, 'tis true, who really incline, or intend to perform this Operation, may not be so apt to judge a Description too full, and over-minute and particular, when still consistent with Truth; yet, to such who already can, or that know how to perform it, or those who want and desire only to have a general Notion thereof, so as to be able to chat, or talk a little on such Subject, our Account then, must surely be sufficient. And we do, in our Conscience, still further, truly, sincerely and faithfully believe, that we cannot miss most certainly cutting the Parts we particularly mention, and none else; since neither the different Pressure (from the holding of the

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the Staff) nor that externally on the Skin or Integuments by the Fingers, can make any Variation, no more than the absolute Certainty always of the Hand which Cuts; nor can there be any such thing, as the more or less sliding or slanting of the Knife, with us: Neither does the Thickness, or Fatness of the Parts of some, so as to be less fix'd or uncertain, signify any thing as to that, no more than the *Lusus Naturæ*, or the particular Wantonness of Nature in the placing of her Parts either higher or lower in Situation, or Insertion; whether they be Muscles, Ligaments or Vessels. All these, we say, and do firmly believe, can make no manner of Difference, as to our Certainty of always cutting the very same Parts, we so particularly have described, and none else: Nor that even all the Strugglings or excessive Strainings, Shifting, or Heaving, which any Patient can be supposed to make, can signify any thing as to that. And now, as for the Operations of *searching*, the *lesser and greater Apparatus*, the *High Operation*, as well as that of the extracting the Stone from Women, we do believe it the best Way to have followed, borrowed or stole; and so to have given the World much the same Account from others, as they have much more fully done before us, without hardly thinking them worth the naming, but rather chuse to give such Accounts as our own*.

157. “ *In describing the Nature of Cataract; it has hitherto been a positive Maxim laid down by Oculists of every Nation, that there is one certain Stage of the Distemper, in which only the Operation is proper, and this State of the Disease* “ *is*

* And consequently the Discovery of all this, must be of singular Use to Foreigners.

" is said to be the Maturity of the Cataract."——

And particularly believed and observed to be so by us of *Guy's* or *Chelsea*, the great Improvers of these Affairs, as well as that of the Knowledge and Cure of all the other Maladies incident to the human Body. Neither do we in the least mind or believe what any others may have said or writ on this Subject, of their having succeeded well before ripe, even were they Writers on the Spot. Nay, were they to prove to us, that it has even been done by our Hand (or that of our Patron) and that neither of us, even to this very Minute know any thing at all of the Matter, of any such Success, as some may be ready to alledge or affirm.

158. Thus *" they have compared it to the Ripeness of Fruits, which at that time slip their Shell."*——

" They say the Disease upon its first Invasion gradually liquifies the Humour ;" yet, tho' *" they say"*

so, or who they are who say so, whether it be others besides our selves in *Southwark*, or at *Chelsea*, or who else it is, is not material ; it being sufficient, that *" they say"* so. 159. We do likewise believe, that the *" Glaucoma"* cannot principally be a Disease of the Vitreous, as well as at the same time an Affection of the CrySTALLINE, not altogether so opaque *" as the Cataract."* Now, *" since then*

" Glaucoma is no other Disease than a Cataract, we must at once discard the Distinction of those two

" Distempers ;" and so without the least Ceremony, upon our own proper Authority, call it the same ; and also couch, or remove it in the like manner. Thus *" the Distinction of a true and false*

" Cataract will appear equally frivolous, and consequently the Sub-divisions compriz'd under this last,

" such as the Vague, the Milky, the Purulent, the

" Doubtful, the Membranous, the Fibrous, the Shaking,

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“ king, and more in the Books of this Disease, most
 “ of which are Names that puzzle the Memory,
 “ without informing the Understanding ; and indeed
 “ have no Foundation in nature.”

160. Thus “ *the white are supposed Milky,*” (not from their breaking also, as a Curd ;) “ *the green and yellow horny,*” as the best or pearl-coloured likewise are, when very old. And tho’ the “ *black Cataract* ” has been described very particularly by most Authors, yet I dare say, and do solemnly declare, that they have been most grossly mistaken therein ; since in a “ *Gutta Serena, where* “ *no Disease appearing,* (that we know) *the Pupil* “ *seems black, as in a natural State ;*” as most justly and exactly observed by us at Guy’s, &c. and that there is no Shrinking, or preter-natural Contraction of the *Iris*, with great Clearness of the Crystalline, as asserted by Foreign, as well as Domestick Authors ; and therefore that “ *Gutta Serena,*” in plain *English* a *Serene Drop*, must be black ; and consequently that “ *Glaucoma, Gutta Serena, and black Cataract,*” are all the same thing. And whatever Foreign Author there may be, (tho’ of the very best Credit) who asserts, that he has even beyond his Expectation, couch’d the *black Cataract* with Success, we do believe it to be utterly false, and that the Truth is not in him.—

162. And thus “ *the Operation of the Milky Cataract is falsely said never to succeed ;*” for saying which we also declare, that the Truth is not in them ; nor matters it who it was said so, since it was they, that said so. “ *Of this* (kind then) *there are two sorts ;*” and thus tho’ we have “ *dis-* “ *carded the Distinction, the frivolous Sub-division,* “ *such as the Milky, &c.*” yet we think and believe it altogether proper to “ *subdivide* ” even that sort or any other, as occasion serves us. 164. And

we

we further believe, that “*we cannot well do without the Speculum Oculi*” in couching; because others of Repute never use it. We verily believe also, that in the next Edition of our Operations, we shall in the same manner as in “*Cataracts*,” reduce all *Hernia’s* or Ruptures, of whatsoever kind, to one Sort only. 165. And now, as to the “*cutting of the Iris, there are two Cases where this Operation may be of some Service; one, when the Cataract is from its Adhesion immoveable. — This I have spoke of in the preceding Chapter, and consider it as a Species of Blindness not to be reliev’d: But Mr. Cheselden has invented a Method of making an artificial Pupil, by slitting the Iris, which may relieve.*” 161. “*The Operation can hardly be advised, though I once did it with Success on a Person who had been blind thirty Years.*” And tho’ these excellent Sententious Remarks of ours, may appear a little like cross-purposing, or some-how contradictory to one another; yet we do sincerely and verily believe them to be very true, and exactly consistent with each other. 166. Nay, we do even believe, and allow the “*Speculum Oculi*,” to be as “*absolutely necessary here,*” as the Speculum Ani may be in all such like Cases, for facilitating the Entry of the Pipe, &c. 161. “*This Operation, by what I have seen, has answered best in Adhesion of the Crystalline, tho’, to speak truly, very seldom even there.*” — I once “*perform’d it with tolerable Success; and a few Months after the Orifice contracted and brought on Blindness again.**” And thus we do truly believe, that all this so very ingeniously and well put together, no Man can find any difficulty in, or in the least any way doubt of. 163. We do also

* This seems somewhat to confirm what I before hinted on this Subject, in the Discourse of Mr. Cheselden.

also affirm and believe, "*that the Ancients gave the Name of "Uvæa to the Choroides,"* not because its dark Colour is like that of a full ripe dark Grape, but rather from the imperfect, unripe, green Grape; because somewhat of the greenish Colour has been observed in some Part of this Membrane in some Brutes *.

And I do further believe, that all the Operations on the Eyes, which are so very numerous in most Authors on that Subject, are all most judiciously to be reduced and comprehended under the three Operations already published by us; the principal of which three, the World is so highly and most particularly obliged and indebted for to our never sufficiently to be prais'd Master, that singular Improver and great Ornament of the Profession; and thus in reducing all to these three, we cannot believe it in the least necessary to speak of or to publish any more Operations on the Eye; nor of any more Instruments, than those we have mention'd and approv'd of: Neither do we think or believe, that Oculists or Operators for the Eyes, should be at liberty to make Use or Choice of any other kind of Needles, than that we approve of, or that of our most admirable † Knife, so judiciously invented by the Ornament of the Profession: Nor do we believe or think that any
Senior

* And thus the Reader cannot but agree that Foreigners will be vastly improved on the Discovery of all this Heap of Knowledge to them.

† And tho' some maliciously insinuate, that this well-contriv'd Knife will certainly wound and cut (unnecessarily) the Humours, as well as Tunicks, much more than any Needle; and on the using it in the operating to make the Pupil, even cut the Orifice where it enters, still more than at first; thus letting out a greater Quantity of the aqueous Humour, &c. yet 'tis enough that 'tis our Master's new Invention, and therefore the best, being a very notable Improvement, as well as the Operation, as we have most clearly demonstrated.

Senior, or other Surgeon, ought so much as to see, far less to make choice of any other kind of Instrument, than those already mention'd and approv'd by us; since there can not any Variation be allow'd, as where an Instrument may justly be prefer'd to another; whether from the Use, Minuteness, or Largeness of Parts; or as the Judgment of the most experienced Surgeon would pretend to.

Neither can we believe that mentioning the manner of performing that excellent Operation of the Drum of the Ear, originally and solely invented by that great Improver of Surgery, our own so celebrated Master, can be any way here necessary to be related, since already so very well known to the learned World, both for its Ornament and singular use.

And as to the great Usage of dry Lint, so very much recommended by us in fresh Wounds, and on which we value our selves so highly, we cannot by any means believe or allow, that *Garengoot*, or any other, ever used or recommended it before us*.

Neither do we believe that any thing material is to be borrowed from any ancient Authors, and nothing at all from the Moderns; and so we cannot

* And thus we extremely admire Simplicity and Plainness in Practice, which is surely highly commendable; nor do we ever over-do it, even when we advise only cold Water in a violent Bruise of the Leg, tho' attended with a Rheumatic Humour, &c. and if it miss, it may some time or other hit, without the use of other Evacuations, &c. Thus the rendering of Practice easy, is mighty praise-worthy. Are we not well inform'd of one of notable Title, who makes no Ceremony to affirm to his Patient, that in Inflammations or Piles, the use of all Ointments are alike? that is, that one is as good as other; tho' upon Tryal of some good Woman's Ointment such ailing Person has experimentally found the Opinion not infallible.

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not consider *Ambr. Paré*, *Aquapendent*, and *Hildanus*, but as very tedious, tiresome, troublesome Fellows, not in the least worth our Notice; nor any Knowledge or Instruments that can be pretended to be pick'd from them, any more than from *Scultetus*, *Girault*, or *Guillemau*, or from any Authors, on the Eyes in particular, no more than from the *Edinb. Med. Essays*, &c. And even were there any thing to be found in any of them, we cannot be of Opinion, that we ought so much as to have it in the least thought or surmiz'd, that we ever borrow, steal or learn from any one; far less, to be so very mean as to name any such, we may privately have been oblig'd to.

And we do therefore, verily and sincerely believe, that the wise *Maxim*, so justly approved of by those before us, in relation to the utter sinking of Authors, by not mentioning them (as wise Gamesters do their Money in a bye Pocket, when they incline to hide their Gains) is truly and sincerely the most laudable, and highly commendable Method for any Author, who would pretend to thrive in the World. And thus accordingly to filch or steal from all or any one, and ~~at~~ the same time to name none, unless to slight or find fault, even with the very best of Writers; and thus, I say, most sagaciously to retail all as our own, not allowing that we owe the least Obligation to any, unless to that singular Improver of our Art, whom we so fortunately served our Time to. And as we believe and know, that no *Englishman* ever writ Operations before us; we do at the same time aver, believe and affirm, that *P. Low*, given as an Instance, was actually and *bona fide* a *Scotchman*, as he styles himself, and consequently was no *Englishman*; tho' it is true indeed, *Scotch* as he was, he writ Surgery and Operations, with the manner of performing them, as well

well as to give the Cuts of 'em, together with the Instruments, &c. yet now, whether on account of the Language, or otherwise, is by all knowing Booksellers thrown by amongst their Waste-paper ; and consequently must be notoriously false ; which is so maliciously insinuated by our Enemies, that it is a far better Book than our own, so very fresh, spack and span-new, just now published by us in a fresh and fashionable Stile and Language ; for the want of which, with the great Knowledge and Improvements contain'd therein, all Foreigners have hitherto been at so very great a Loss.

We do likewise believe, for the further Instruction of Mankind, whether Foreign or Domestick, that Proposals for the printing of new Operations, by a junior Student in Surgery of 15, with the proper Assistance of a School-master, a Bookseller, an Instrument-maker, and an Engraver ; will be of great use, a very excellent and most valuable Piece, far preferable to any hitherto published. It is indeed to be collected, or (under the Rose) to be privately borrow'd from *Charriere*, *Garengeot*, or *Le Clerc* ; some one more particularly, or from all of them together ; tho' at the same time to have the Words and Substance so very carefully, and most artfully transposed from these tedious, tiresome, insipid Foreigners ; and to be so beautifully transplanted into our own Phraseology and Language ; indeed so excellently translated, transmography'd and blended the one with the other, by the great Skill, Art and Learning of our School-master and junior Surgeon, as that no Mortal shall be able to discover but that it is an entirely *English* Production, without the least Obligation to any Foreigner, or any body else whatsoever ; which shall at the same

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time be so very curiously embellished with Copper-plates, of the Instruments ; such as the Graver and Instrument-maker shall judge most proper, as well as in like manner approved by our junior Surgeon and Bookseller ; so that there will hardly be a Youngster in Town or Country, who will not hugely crave, and highly wish to have it ; nay, that the busy unthinking world in general, will be greatly fond thereof, and consequently must turn to a very extraordinary Account.

And I do further and sincerely believe, that the best Method of disposing of our Books, is at * a Coffee-house, much frequented by our Props or Pillars, Friends, and the Ornament of the Profession, by reason of the many comfortable, gentle, puff-sick and sciolifick refreshing Gales, which are continually blown from every Corner and Point of the Compass there, so very advantageously directed to carry them on their prosperous Voyage all around our Nation.

And we likewise assert and most firmly believe, that a *Treatise on the Operations of Surgery*, as ours is term'd, does not infer all the Operations ; neither need we to have said, *some or part* of the Operations ; since we our selves very well know what we mean, or that we would be at. Nor can we be of Opinion it could be any way necessary, to have put into a *Treatise on the Operations of Surgery*, Phlebotomy, or Arteriotomy, Application of Leeches, or that of Cupping, Issues, or Setons, Tongue-tying and Cutting of the Gums in Children ; as well as that of the Operations for the *Teeth* ; that of the Nails growing inwards. The extracting of Bones, or other extraneous
Bodies

* Vid. Letter to the Booksellers, page 20, of the *Reasonableness of Coffee-men, &c. dealing in Books.*

Bodies out of the Oesophagus, or from other parts of the Body, as Bullets, &c. The Operations of the Eyes in general, too many for us to trouble ourselves to enumerate; nor to mention the Cæsarian Operation, the Procidencia Uteri, and Ani, no more than the Extirpation of Fingers and * Toes, which we cannot believe any way necessary to be mention'd, as a distinct Operation, with the proper Cuts of the Instruments, &c. and still less, Ficus or Sicosis, Warts, &c. The extracting of Bodies natural or unnatural out of the Womb. The Operations and Doctrine of Fractures and Dislocations, more proper to be treated of by Bone-setters; nor that of ingrafting of the *Small-Pox*, tho' so much of late practised by Surgeons, more especially since not invented by us, nor mentioned by any *Briton*, until one *Kennedy a Scotchman*, (next a-kin to a Foreigner,) did publish the Account thereof, in his *Essay on external Remedies*. Neither do we apprehend it to have been any way near so necessary, to have taken Notice of the most proper manner of treating venereal Buboës, with their indurated Lips and Glandules; or even that of Shankers, &c. as it is that of the Phymosis, and Paraphymosis: And as to any further Improvements in venereal Maladies, there are, 'tis true, some Quacks, both abroad and at home, who pretend to some speedier, or easier Methods; particularly in some Cases of Pox or Gonorrhœa, &c. tho' we have not judged proper in our own Hospital, no more than in that of our Master before us, or any other in Hospitals, upon any occasion, to make the least Alteration whatsoever, from the common Method in Practice this 40 Years, for the Cure hereof, because we would most judi-

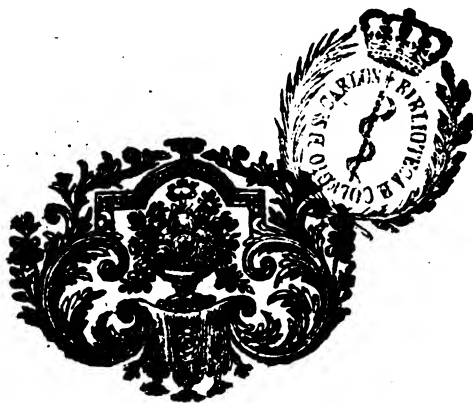
* Neither can we imagine, that the saving of most or half the Bone or Joint of a Finger, &c. can any way, ever serve, either for Ornament, or Use.

ously

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ously avoid the scandalous and ignominious Name of being called Quacks.

And thus the whole World, particularly the extremely Learned, cannot but very clearly observe, the most extraordinary Improvements we, and our so justly celebrated Ornament, our Master, have made (in this Profession) and for which we cannot believe nor doubt, but that both Foreigners as well as Countrymen will be very ready to make us their most sincere and thankful Acknowledgments for these our great and so very singular Performances.



E R R A T A.

For Row read Rau. Page 32. line 5. for *his* r. *this*. P. 42.
l. 16. for *Spherical* r. *Speacles*. p. 58. after *Elongement* r.
of the Humours.

